

MEETING  
OF THE  
SCIENTIFIC REVIEW PANEL ON TOXIC AIR CONTAMINANTS  
CALIFORNIA AIR RESOURCES BOARD

SOUTH SAN FRANCISCO CONFERENCE CENTER  
255 SOUTH AIRPORT BOULEVARD  
SOUTH SAN FRANCISCO, CALIFORNIA

THURSDAY, OCTOBER 31, 1996  
9:30 A.M.

Nadine J. Parks  
Shorthand Reporter

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

MEMBERS PRESENT

Dr. James Pitts, Chairman  
Dr. Craig Byus  
Dr. John Froines  
Dr. Gary Friedman  
Dr. Stanley Glantz  
Dr. James N. Sieber  
Dr. Hanspeter Witschi

Representing the California Air Resources Board:

Genevieve Shiroma, Chief, AQMB  
Dr. Joan Denton, Manager, Substance  
Evaluation Section, SSD  
Jeff Wright, Stationary Source Division  
Kirk Oliver, Staff Counsel  
Bill Lockett, Deputy Ombudsman, Northern  
California  
Peter Mathews, Office of the Ombudsman

Representing the Office of Environmental Health Hazard  
Assessment:

Dr. Richard Becker, Director  
OEHHA  
Dr. George Alexeeff, Chief  
Air Toxicology & Epidemiology Section, OEHHA  
Dr. Bart Ostro, Chief  
Air Pollution Epidemiology Unit, OEHHA  
Dr. William Vance, Acting Deputy Director,  
Scientific Affairs  
Jennifer Mann

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1 P R O C E E D I N G S

1 --o0o--

2 CHAIRMAN PITTS: Good morning. I want to welcome  
3 all of you to this public meeting of the Scientific Review  
4 Panel on Toxic Air Contaminants.

5 I presume that you all have with you or will have  
6 available -- if you don't, we can make it available -- the  
7 formal agenda for this meeting.

8 I have one modification to the agenda. Given the  
9 importance -- from a lot of aspects, science, public health  
10 in general -- and the opportunity for the SRP to meet with  
11 key figures in the OEHHA to discuss matters of mutual  
12 interest to each organization -- ARB, OEHHA, and the SRP --  
13 the chance to do this in a fairly comprehensive manner on  
14 two issues, particularly lead and ETS, for example, in  
15 consultation with the Department of Pesticide Regulations,  
16 we have actually deleted -- we've postponed Item 3 on our  
17 agenda. Item 3 is the update of the DPR program.

18 We have confirmed with them that that will be the  
19 first item on the agenda in our December 16th meeting. That  
20 will give us ample time to discuss these things. They have  
21 no problem with this modification.

22 Now, I'd like to begin on Agenda Item 1, which is  
23 a report on California's Environmental Protection Agency's  
24 risk assessment practices project. And in so doing, the



1 presentation will be by the new Director of OEHHA, whom we  
2 welcome to our group, Dr. Richard Becker.

3 We'd like to have him come forward, then.

4 Welcome. And we'd like to maybe perhaps start by -- perhaps  
5 you could introduce members of your team who are here today  
6 to all of us. And just briefly perhaps for the edification  
7 of the Panel members, maybe give us a couple of comments on  
8 your background and sort of where you came from and where  
9 you're going in your new and highly responsible position.

10 DR. BECKER: Great. Thank you. I'm going to  
11 steal your microphone.

12 CHAIRMAN PITTS: Good. That's one way to keep me  
13 out of the discussion.

14 (Laughter.)

15 DR. BECKER: Good morning, everyone. Again, thank  
16 you for the welcome. It's a pleasure to be here addressing  
17 the Scientific Review Panel of the Air Resources Board.

18 My name is Richard Becker. I'm the new Director  
19 of the Office of Environmental Health Hazard Assessment. I  
20 was appointed September 3rd by Governor Wilson. And it  
21 really is a pleasure. It's a tremendous responsibility, and  
22 it is for me very much of a challenge.

23 Our job at the Office of Environmental Health  
24 Hazard Assessment -- we play a key role in Cal-EPA's  
25 programs and the programs of the State. As the Scientific

1 Review Panel well knows, we are charged with the objective  
2 scientific evaluation of health effects of environmental  
3 chemicals.

4 And what I'd like to talk to you about today,  
5 briefly, is this external review that has occurred. But  
6 before I do that, I want to introduce the folks from the  
7 Office of Environmental Health Hazard Assessment who are  
8 here with us today.

9 I have the Acting Deputy Director for Scientific  
10 Affairs, Bill Vance; let's see, the Section Chief for Air  
11 Toxicology and Epidemiology, George Alexeeff; Dr. Bart  
12 Ostro, who is the lead in writing the lead health assessment  
13 document; Jennifer Mann, who's one of our research  
14 scientists. We have Dave Morey, who is one of our  
15 scientists in the Pesticide and Environmental Toxicology  
16 Section; Michael DeBartolimes (phonetic), a Senior  
17 Toxicologist; Bob Pacirello (phonetic), who is our Chief of  
18 External Affairs; and Debra Hesse, who is our new Deputy  
19 Director for Admin. and Outreach. And last, but not least,  
20 Dr. Tom McDonald, who is the key staff person for the review  
21 that I'll speak about shortly.

22 Did I miss anyone? Okay. Well, you'll hear  
23 probably from most of these folks today.

24 This review was mandated by a law sponsored by  
25 Senator Charles Calderon, SB 1082. And the law was passed

1 in 1993, I guess, and it became effective in January of '94.

2 It required the Director of the Office of  
3 Environmental Health Hazard Assessment to convene a  
4 committee of outside scientific experts to conduct a  
5 comprehensive review of the policies, practices, and  
6 procedures of risk assessment -- chemical risk assessment  
7 used by all the boards and departments within Cal-EPA, not  
8 just OEHHA, but OEHHA, Department of Toxics, the Air  
9 Resources Board, Department of Pesticide Regulation, the  
10 Water Board, and I'm probably missing one other one. But  
11 all of the boards and departments were required to  
12 participate.

13 The product of their review -- and I have the  
14 draft report here. And I think each one of the Panel  
15 members was sent at least the executive summary. Oh, they  
16 did receive the entire report. Great.

17 The product of their review was to make  
18 recommendations for improving the science and conduct of  
19 risk assessment within California.

20 DR. FRIEDMAN: Excuse me. Some of us did not  
21 receive that.

22 DR. BECKER: Mr. Lockett, can we make sure that  
23 the Panel members all get a copy of the report?

24 (Thereupon, Mr. Lockett indicated an  
25 affirmative response.)

1 DR. BECKER: Thank you. Well, I won't send you  
2 the draft, because the final report is in the final stages.  
3 So, we will be sure you get at least the final report.

4 DR. FROINES: I think I'd like that document as  
5 well.

6 DR. BECKER: Okay.

7 DR. WITSCHI: Me, too.

8 DR. BECKER: Okay. We'll send both then.

9 The charge to the committee: To assess whether  
10 the methods, policies, and procedures used by Cal-EPA are  
11 based on sound science. So, this is basically an outside  
12 scientific peer review of the program of risk assessment  
13 within Cal-EPA, and to assess -- in terms of consistency --  
14 the appropriateness of any differences between the methods  
15 and procedures used by Cal-EPA and those used by other  
16 similar bodies, such as U.S. EPA, or the National Academy of  
17 Sciences, or FDA.

18 In trying to decide how to compose this committee,  
19 we were confronted with a very difficult task, because  
20 everyone knows risk assessment is made up of various  
21 scientific disciplines. And how do you construct a  
22 committee that can comprehensively review in detail each and  
23 every one of the disciplines of risk assessment?

24 Well, we decided on a hybrid structure that worked  
25 extremely well. The committee was composed of 34 outside

1 expert scientists drawn from academia, industry, and  
2 research institutions. We convened a core committee of five  
3 members headed by Professor Sieber. And this core committee  
4 then provided the continuity throughout the entire review  
5 process. And at least three. and most of the time, all five  
6 core committee members attended each and every one of the  
7 meetings of the committee.

8 And then we had expert -- topic-specific expert  
9 committees for hazard identification, for dose response, for  
10 exposure assessment, fate transport, and risk  
11 characterization.

12 We had a lead scientist, and then subcommittees,  
13 if you would, composed of five or six different scientists  
14 with expertise in each one of these topic areas.

15 DR. GLANTZ: Can I ask a question?

16 DR. BECKER: Yes.

17 DR. GLANTZ: All right. I've been looking over  
18 the list. I see -- I mean, it's mostly academics and  
19 government people. But I do see several representatives of  
20 business, which is appropriate. But how come you didn't  
21 include anyone who is an environmentalist?

22 You know, there are scientists who work with  
23 comparable groups, you know, with the same level of  
24 expertise of the people with industry, but they bring a  
25 different perspective.

1 DR. BECKER: As far as I can tell, in terms of the  
2 committee that we pulled together, it was meant to represent  
3 all aspects of the science and disciplines of risk  
4 assessment.

5 We did contact people and solicit through both  
6 public notice and also informally participation on this  
7 committee. And this is representative of those people who  
8 indicated their interest, if you would, in participating.

9 DR. GLANTZ: So, are you saying that you solicited  
10 participation from the environmental groups, and they  
11 declined?

12 DR. BECKER: Well, at least to the extent that we  
13 provided an opportunity for them to participate as committee  
14 members through our public notice.

15 And, Tom, correct me if I'm wrong, but we did send  
16 out a public notice at least on one occasion, if I recall,  
17 soliciting ideas and input for this committee.

18 DR. GLANTZ: I don't understand.

19 Are you saying -- when you say ideas and input, do  
20 you mean like the public comments we get here, or  
21 suggestions for specific people to sit on the committee?

22 DR. BECKER: I believe we solicited some specific  
23 people. But I can check on that.

24 Tom, do you recall?

25 This was before I joined the Office of

1 Environmental Health Hazard Assessment; so, I don't know.

2 DR. McDONALD: (From the audience.) Yeah, we  
3 actually put out notices soliciting issues for  
4 consideration.

5 CHAIRMAN PITTS: Excuse me. We have a court  
6 reporter, and we're taking recordings here of the entire  
7 proceedings. Could we ask the audience, if they have  
8 questions, to please speak up so she can hear what you say.  
9 And identify yourself. There you go.

10 DR. McDONALD: My name's Tom McDonald from the  
11 Office of Environmental Health Hazard Assessment.

12 To my knowledge, we merely put a notice in the  
13 regulatory notice register soliciting ideas and issues that  
14 were very important to the committee for consideration  
15 during their review, not a direct public solicitation of  
16 names.

17 DR. GLANTZ: Well, do you have any concern -- I  
18 mean, since, in looking this over, there's some questions  
19 about balance, and fairness, and bias, and all this other  
20 kind of stuff, which are legitimate issues.

21 Are you at all concerned that this may have been,  
22 to some extent, a biased committee?

23 DR. BECKER: Well, I think when I explain the  
24 whole process, you'll get an idea about how open this  
25 process was for participation. And I think that, in my

1 view, it was a completely unbiased committee that was  
2 centered on evaluation of scientific issues.

3 We solicited public participation. If you look at  
4 this slide that I've put up, we held 10 public meetings and  
5 workshops. This was -- all the committee discussions,  
6 deliberations, activities, presentations to the committee  
7 were conducted in a public forum, where there was ample  
8 opportunity for participation on panels from the audience.  
9 And I think that it was, in my mind, the most open review  
10 process that I have ever seen.

11 In some ways, it was difficult for the committee,  
12 because everything they did was right in the public eye.  
13 But, on the other hand, that really provided for a great  
14 opportunity for review, and comment, and input as the  
15 process occurred.

16 Now, Dr. Sieber, do you want to add anything to  
17 that?

18 DR. SIEBER: Well, you're exactly right.  
19 Everything was open. And the rooms typically were full of  
20 people from literally every camp -- risk managers, risk  
21 assessors, industry, environmentalists. And all of their  
22 inputs were heard, and recorded, and became part of this  
23 report.

24 So, it was kind of a big consensus builder  
25 pyramid. That's the way I looked at it.



1           And, as far as representatives of the  
2   environmental groups, I'll have to say, since we all know  
3   the academic perspective, you can see that with some of  
4   those academics, we would get that input as well.

5           DR. BECKER: Thank you. In any event, there were  
6   10 public meetings and workshops held starting in of '95,  
7   and ending last May.

8           And, in fact, if you look at what transpired --  
9   and the transcripts are available from last May -- the  
10   committee actually drafted their report in public with some  
11   public participation at that time. So, it was a  
12   tremendously open process.

13          Overall, I think everyone that participated was  
14   very pleased at how the exchange of information occurred in  
15   this process. Everyone had a chance to be heard. And their  
16   comments and their points were duly noted, and I think  
17   recorded and responded to in the committee's findings.

18          The committee made several general  
19   recommendations. First and foremost, though, was their  
20   finding. And I think the finding is important to emphasize  
21   to the Scientific Review Panel, and it's important for us in  
22   the Office of Environmental Health Hazard Assessment as  
23   well.

24          And their finding was that, in general, the risk  
25   assessments of California EPA were of high quality, both

1 from professional practice standards and also from a  
2 scientific standard. If you would, they were of the highest  
3 quality.

4           Nevertheless, the committee found that risk  
5 assessment, as we all know, is an evolving science. It's an  
6 early, if you would, a very early science in relation to  
7 some of the more established areas of environmental sciences  
8 in general. And the committee found that there was need for  
9 continuous improvement.

10           And they made some very general recommendations,  
11 and then some very specific recommendations. I believe the  
12 report has over -- if you count the specific  
13 recommendations, over 140 specific, point-by-point  
14 recommendations for improving the way risk assessment is  
15 done, and ensuring that California EPA risk assessments are  
16 based on sound science and are effective, if you would, in  
17 evaluating information and communicating that information to  
18 the public and to risk management.

19           First, in terms of consistency, the committee  
20 generally found that there was a need to improve consistency  
21 within the agency across boards and departments. I don't  
22 think it's unusual for that type of finding to be made. I  
23 believe that someone commented that this same kind of thing  
24 occurs in the Federal Government; that you find like  
25 programs to be consistent and then programs somewhat

1 different, say, the pesticides and toxics to be different.

2 And there was a feeling that there should be a  
3 greater emphasis on consistency and harmonization within the  
4 agency, and then with our counterparts at the U.S. EPA as  
5 well.

6 In terms of the quality, one of the major issues  
7 was that there was a great deal of difference between the  
8 boards and departments in their use of internal and external  
9 peer review processes.

10 And so, there was a recommendation that the peer  
11 review processes be formalized, and that there should be  
12 also, in addition to that, better forums to bring newer  
13 methods of risk assessment, new methods of scientific  
14 analyses, or environmental health sciences into the risk  
15 assessment processes.

16 In terms of risk assessment and risk management,  
17 and that's the acronym RA/RM, and risk communication, the  
18 committee made a recommendation that there should be early  
19 input from risk management and external stakeholders into  
20 the risk assessment process. And this is part of a general  
21 theme, that the risk assessment should be tailored to the  
22 needs of the risk management.

23 And then -- yes, I'm sorry?

24 DR. FRIEDMAN: Will you say that last sentence  
25 again?

1 DR. BECKER: I believe I said something to the  
2 effect that the risk assessment needs should be tailored to  
3 the needs of the risk management. That leads me to the next  
4 bullet.

5 CHAIRMAN PITTS: Could you explain the needs of  
6 the risk management?

7 DR. BECKER: Yes.

8 CHAIRMAN PITTS: Because, as I understood 1807, it  
9 was set up to definitely separate risk assessment, which is  
10 science, from risk management, which is regulation.

11 How can you tailor the science, I guess --

12 DR. BECKER: Well, I think that gets to the next  
13 bullet, which is what I was trying to get to, which is  
14 balancing the level of effort with the importance of the  
15 decision.

16 DR. FROINES: Well, I think that there's --

17 (Thereupon, the reporter asked the speaker  
18 to use the microphone.)

19 DR. FROINES: I'm sorry. I want to -- I just made  
20 a little reaction to that. I didn't mean to start a  
21 discussion. I think there's two questions. One is, what  
22 does the report say, and then how does the agency interpret  
23 what's on that overhead as a policy decision with respect to  
24 how all of this is implemented.

25 And that's where we get into nitty-gritty of how

1 does one intend to implement it.

2 DR. BECKER: Well, one of the other findings, of  
3 course is that there needs to be interaction, communication  
4 between the risk assessor and risk manager. I don't know if  
5 I have that on the next slide or not.

6 In any event, the risk managers and the risk  
7 assessors need to work hand in hand, or at least  
8 communicate, so that the risk manager can understand  
9 what the risk assessment means and what it is saying, and so  
10 the risk assessor can understand the needs of the risk  
11 manager in addressing those particular areas of risk  
12 assessment, whether it's a particular facility or site, or  
13 whatever, there needs to be better communication and better  
14 interaction.

15 In terms of resources, the committee looked at the  
16 resources that were available within Cal-EPA for risk  
17 assessment, and made the very general recommendation that  
18 the agency should ensure that there are adequate resources  
19 with the specialized expertise for the agency to conduct  
20 risk assessments. Specifically for the Office of Health  
21 Hazard Assessment, it was noted that we lacked resources in  
22 the area of epidemiology. And that's something we all well  
23 recognize.

24 The committee went on to provide some guidance  
25 that we should foster interaction with those other State

1 agencies and the University -- the universities that are  
2 available, so that we can get the specialized expertise that  
3 we may not have available at the present time to address  
4 particular important issues.

5 DR. SIEBER: That's specifically -- if I could  
6 amplify slightly on that.

7 DR. BECKER: Yes.

8 DR. SIEBER: Within OEHHA, the recommendation was  
9 that, since OEHHA did not have a large epidemiology  
10 expertise, that it should seek ways to obtain that  
11 expertise.

12 DR. BECKER: Thank you. Well, the report is  
13 broken out into topic-specific chapters as well as a general  
14 overview and an executive summary.

15 Each one of the topic-specific chapters has  
16 recommendations which were the result of that subcommittee's  
17 work. It's offered primarily or almost exclusively by the  
18 expert committee members themselves. And I want to just  
19 highlight a few of those specific recommendations that may  
20 be relevant to OEHHA, ARB, and the Scientific Review Panel.

21 First, in terms of hazard identification, there  
22 was some discussion about dated risk assessments and what  
23 they mean. And when new information is available, when do  
24 you go back and revise a risk assessment? And I think  
25 that's an important issue that we need to come to grips

1 with, in that sometimes we're dealing with risk assessments  
2 that may be 10, 15, or even 20 years old at this time.

3 I don't think we're that bad here in California,  
4 but it may be the case. So, there needs to be some  
5 provision for reevaluating these risk assessments for  
6 individual agents, and determine when you would go back or  
7 when you wouldn't.

8 DR. GLANTZ: Are you aware of the fact that we  
9 actually have procedures to do that --

10 DR. BECKER: Yes.

11 DR. GLANTZ: -- in the SRP and have done it?

12 DR. BECKER: Yes. We were aware of that; the  
13 committee was aware of that. Remember, these  
14 recommendations are Cal-EPA wide, not just specific for one  
15 particular board or department.

16 DR. GLANTZ: Yes, but to that end, I mean -- maybe  
17 this is self-serving. But in looking at what they're  
18 saying, it seems like we're actually doing pretty good by  
19 your criteria there.

20 I mean, how do you see this process as fitting  
21 into the overall spectrum of stuff going on?

22 DR. BECKER: If I may presume to speak for the  
23 committee, I would think, overall, they were very impressed  
24 with the ARB's efforts in terms of the openness of the  
25 processes, the high quality of their science, their exposure

1 monitoring, and the type of peer review that's conducted  
2 here.

3 DR. SIEBER: I think the Scientific Review Panel,  
4 of course -- as Chair of the RAAC committee and member of  
5 the SRP, I'm very familiar with how the SRP operates. And I  
6 would have to say that in much of the discussion, a  
7 comparison was made directly with the SRP. And in many  
8 cases, it was help up as a model that the other components  
9 of Cal-EPA should emulate.

10 DR. FROINES: Can I make one comment. Since we  
11 all wear multiple hats, I serve on the Carcinogen  
12 Identification Committee under Proposition 65. And one of  
13 the concerns that has been expressed by that committee is  
14 that we very carefully avoid a process that ends up having  
15 to spend all our time reevaluating old decisions, and that  
16 we don't want to turn the process into something where  
17 everybody who wants to have their -- the impact on their own  
18 interests minimized keep coming in and asking for  
19 reevaluations.

20 And so, I think's a very important decision,  
21 because I don't think we want to open the door to a  
22 considerable number of reevaluations that are based on  
23 self-interest rather than science.

24 DR. BECKER: Thank you.

25 One of the others was the standardization of



1 collection of information. And the idea was -- and I think  
2 I've captured the essence -- that this information is useful  
3 for various board and departments. And if it's not  
4 standardized in some way that could help collect it or how  
5 it is assembled, if you would, that it may be somewhat to  
6 translate across these various boards and departments. So,  
7 there should be some thought -- I think the committee's  
8 thought is making this a more standardized process, and  
9 let's make it more user friendly, both for internally and I  
10 think externally as well.

11 And so, that's, I think, the gist of their  
12 recommendation for hazard identification.

13 In terms of dose response -- and we've just  
14 captured a few of the bullet items here. There are more, of  
15 course in the report. There was considerable discussion by  
16 the expert committees and the core members on alternative  
17 ways of looking at analyses rather than using large  
18 uncertainty factors in our toxicity databases.

19 And there was no specific recommendation on how to  
20 do that, but just think about that. And so, that's a  
21 challenge for us, challenge for us in all the fields of  
22 toxicology and risk assessment.

23 One of the others was to develop guidelines for  
24 using uncertainty factors. There's been a long-standing  
25 practice dating back to the early fifties with FDA using

1   uncertainty factors of 10.  EPA has made some progress in  
2   defining uncertainty factors, breaking them out a little  
3   bit.

4               And there was some discussion about looking at  
5   that, and then trying to decide if, you know, there are some  
6   rules that could be adopted in terms of guidelines for use  
7   of uncertainty factors based upon severity of effect and the  
8   appropriateness of the database.

9               And so, these again, they are not solutions, but  
10   they are challenges to us to begin to address these areas  
11   pointed out by the committee.

12              In terms of exposure assessment, the major  
13   recommendation was to work more closely on integrating fate  
14   transport efforts with human exposure assessment efforts.  
15   And I think it became clear that there was -- while there  
16   was very sophisticated monitoring in some cases; in other  
17   cases, there was no monitoring.  And there was a need to  
18   have that link, if you would, fit in overall to the picture  
19   of risk assessment.  And there's a challenge for us there as  
20   well.

21              And then, again, more emphasis on receptor-based  
22   exposure assessment; human activity patterns when  
23   available.  And in many cases, ARB, or OEHHA, or others are  
24   leading in this way, but this is a general recommendation  
25   that applies to all boards and departments within Cal-EPA.

1 CHAIRMAN PITTS: Dr. Becker?

2 DR. BECKER: Yes.

3 CHAIRMAN PITTS: You might gather that this is  
4 kind of my bag, exposures. I've got to be careful how I say  
5 that.

6 This relates also to this question of  
7 harmonization with EPA. As you know, we discussed this with  
8 you briefly. One of the concerns that I think that -- one  
9 of the concerns that we may have is again that -- how does  
10 one define harmonization, and does harmonization with EPA --  
11 in a regulatory sense, that is a function of the regulators.  
12 That's their function.

13 In the scientific sense, however, it's the  
14 function of the staffs here of the OEHHA and the ARB, and in  
15 the sense -- a function of the SRP in a sense.

16 Let me give you an example of sort of a specific,  
17 and ask how one deals with the EPA in a situation like this,  
18 which involves directly a number of items -- fate and  
19 transport modeling, which involves the actual accuracy and  
20 reliability of those models.

21 And, as we all know, a model is as good as, first  
22 of all, the input data that you put in, the emission data.  
23 "Garbage in, garbage out."

24 And on our -- which will be the topic of  
25 discussion next, which is lead, so this is relevant to the

1 next item, the lead risk assessment.

2 On the first page it says, "Based on information  
3 from the ARB Technical Support Division Air Toxics Emission  
4 Data System, local districts and surveys conducted by ARB  
5 staff, approximately 175 to 182 tons of lead are directly  
6 emitted in California's atmosphere annually."

7 Okay. Great. That's what you take. And you say,  
8 okay, we put it into our model. And we use various types of  
9 models, and we estimate then, as atmospheric scientists,  
10 what the dose would be under certain conditions -- the  
11 overall dose and then near source. But this is the overall.

12 Then we come to the next paragraph and it says --  
13 this is California's -- (Reading) In contrast to the  
14 direct lead emissions estimated by the ARB staff -- your  
15 staff-- the U.S. EPA toxic release inventory, listed  
16 approximately nine tons (nine tons) of lead, and then  
17 compounds, emissions for California, 190.

18 Now, I don't exactly see how one harmonizes a  
19 number of 9 with something 20 higher.

20 I mean, you may harmonize, but it's in a different  
21 octave. It's a very different game.

22 And let me continue. And this is important,  
23 because I think -- this is why I think that California has a  
24 record that it has, being unsurpassed in the world in doing  
25 exactly the sort of work that has been done and is going on,

1 certainly in the air. I can only speak for the areas that I  
2 know something about.

3 Then, it goes on to say (Reading) that the TRI  
4 list -- the TRI list is a national database. So, here's an  
5 actual database giving us nine times of toxic emissions  
6 compiled by the EPA as required by the Superfund amendments,  
7 et cetera.

8 The TRI list relies on the reported emissions of  
9 basic manufacturing industries, which manufacture and  
10 process so many tons or more a year, and so forth.

11 Examples of potential sources that are not  
12 included in the TRI report, i.e. which the EPA has adopted,  
13 are mobile sources -- dum, dum, dum, duh. And among the  
14 mobile sources that are not included are aircraft fuel  
15 combustion, which is, as a matter of fact, 140-some-odd  
16 tons.

17 So, the major contributors of 140-some-odd tons,  
18 which is in the air and isn't even in the report from the  
19 EPA.

20 And I think -- so, do you understand where we're  
21 coming from? We have some sensitivity to this sort of an  
22 issue, and it is one that we would like to see kept well in  
23 mind during the -- during the discussions. And I'd like  
24 your comments.

25 How do you harmonize that?

1 DR. BECKER: Well, you're getting ahead of me, Dr.  
2 Pitts.

3 CHAIRMAN PITTS: Well, that's okay. Well, you  
4 know what they said, "Rommel, I read your book."

5 (Laughter.)

6 DR. BECKER: I think you have to be very careful  
7 in risk assessment or in your exposure assessment document  
8 example. And I think there, you're talking about reported  
9 data versus some type of measured data. And you have to be  
10 very careful on how you look at that data. You always have  
11 to look at the source and the quality of the data before you  
12 use it as a very basic step.

13 And that's kind of more specific, and I think that  
14 in the presentation on the lead document, the ARB staff can  
15 go into a little more detail on that.

16 CHAIRMAN PITTS: How would you harmonize that?  
17 How would OEHHA harmonize? Would you just say that's  
18 nonsense, they don't include emissions from aircraft? I  
19 would.

20 DR. BECKER: I think you have to look at the  
21 quality of the data. And you have to say, what is it? What  
22 is the question that I'm asking?

23 CHAIRMAN PITTS: I'm asking the question.

24 DR. BECKER: No, I'm sorry. As a scientist, you  
25 would look and say, what is the question we're asking? We

1 want to know how much lead is being emitted into the  
2 California atmosphere.

3 And you want to look -- from all sources. And if  
4 you were trying to figure out where the lead is going, you  
5 look at all media, you know. And I think that's where, in  
6 many ways, we in California have led the nation in these  
7 multimedia type of assessments, whether it's from exposure,  
8 or from fate transport, or from risk.

9 And I don't see our efforts -- the recommendations  
10 and harmonization diluting in any way -- and let me repeat  
11 that. I don't think it will dilute in any way our efforts  
12 here within California to maintain and enhance our high  
13 quality of environmental standards and environmental  
14 protection.

15 And if I can quote -- and I don't really remember  
16 which committee member said this, but they made it very  
17 plain and clear. In no way does their recommendations or  
18 does their analysis, their review indicate that EPA is the  
19 gold standard that we are trying to live up to.

20 It was clear -- and I think I'll ask Dr. Sieber to  
21 comment -- that in many ways the efforts of California, the  
22 California EPA, the ARB, and OEHHA I believe, and DPR as  
23 well -- and I don't want to leave any of the other folks  
24 out; so, I'll make it all of the other boards and  
25 departments -- they're leaders in terms of environmental

1 regulations and in risk assessment methodologies.

2           So, I think that harmonization doesn't mean  
3 exactly the same. And I think you used the term "one octave  
4 higher," or "one octave lower," or whatever -- as it's  
5 appropriate for the State of California.

6           CHAIRMAN PITTS: You might say that the EPA in  
7 this case ought to, in this specific case, ought to be  
8 harmonizing with California.

9           DR. SIEBER: Well, let me just make a brief  
10 comment. I know Dr. Glantz has a comment to make, also.

11           By "harmonization," I think that the term that was  
12 used was "to the extent possible." So that when both the  
13 State and the Feds are confronted with the same data set and  
14 they reach conclusions, "to the extent possible," they  
15 should try to harmonize, because they're starting with the  
16 same data.

17           And when there are differences -- and they could  
18 be very legitimate -- I think the differences need to be  
19 explained and defensible so the public doesn't see two  
20 different numbers -- one Federal, one California; they're  
21 totally confused; they don't understand the origin of it.

22           We never met as a committee -- and I think this is  
23 what Rick was talking about, the gold standard -- that we  
24 would automatically forego our responsibilities in the State  
25 and simply defer to what the Federal Government said.



1           And I'm glad to hear Rick remembers that.

2           DR. BECKER: I remember that quote. From my  
3 perspective and the perspective that I'd recommend is that  
4 we need to talk to each other. We need to work with each  
5 other more, work with the Federal agencies. And that way,  
6 in my mind, is a way of leveraging some resources as well.

7           I don't know how this will exactly play out, but I  
8 could envision something where we could do part of the  
9 analysis and they could do part, because they are the  
10 experts in one area and we don't. And then we end up with a  
11 single document, if you would, that works for sound  
12 science's objective, and satisfies both of us. And that, to  
13 me, is one way of harmonizing.

14          So, DPR has another way of harmonizing their  
15 efforts, which is explained more directly in here. It's  
16 about exchanging data and data reviews, and it's a way of  
17 streamlining our processes. And where they're both looking  
18 at the same data sets, they would -- one would be the lead  
19 and one would be the reviewer kind of thing. And in that  
20 way, they are leveraging their resources and streamlining  
21 the processes in some way.

22          DR. GLANTZ: You know, it may be that we're coming  
23 from a -- you've said that this committee and this process  
24 is better with the perspective; so, we may be coming at this  
25 through a distorted view. But when I read this, I was

1 concerned -- and I'm very pleased to hear what you're  
2 saying, because I was very concerned that this meant "lock  
3 step."

4 And I mean, to me, when you talk about -- I mean,  
5 many of these recommendations, to me, are sort of motherhood  
6 and apple pie, things that I thought we were already doing  
7 frankly, at least in this committee.

8 But, to me, to harmonize our results with EPA or  
9 anybody else means to look at what they said and think about  
10 it very carefully, and recognize that they have an extensive  
11 process that they go through, too.

12 But, you know, to -- if we have additional  
13 information -- by definition, we're doing it after they are.  
14 If they have something to look at, they already did it by  
15 the time we're looking at it.

16 And so, we almost always have the benefit of  
17 additional information since the EPA already made their  
18 decisions. Now, there are several places where we've ended  
19 up concurring with them, and there are several places where  
20 we've ended up differing with them. And I think the key is  
21 explaining it and -- as Dr. Sieber said.

22 But I think it's important that this harmonization  
23 thing be interpreted very broadly and interpreted as any  
24 good scientist would. You look at it, and you think about  
25 it, and you consider it, and then you explain any

1 differences very carefully. And you would do that if you  
2 were writing a paper. But it shouldn't be interpreted as  
3 saying that we have to agree with them. We have to consider  
4 what they say. And usually we will, but not always.

5           And the other concern I had -- and I'd like you to  
6 address this -- is this -- California and this committee in  
7 particular are way ahead of the EPA, way, way ahead of EPA.  
8 And you're not implying that we would have to wait for them  
9 before we did anything?

10           DR. BECKER: I see this much broader. I would say  
11 that we would lead, and we may be able to -- how would I say  
12 it -- through our advanced efforts here in California,  
13 actually through harmonization, achieve greater -- I want to  
14 choose my words carefully, not to offend the U.S. EPA -- but  
15 provide a stimulus, if you would, to the EPA to move into  
16 areas that we have moved to where we are advanced in. Let's  
17 put it that way.

18           But I see it as a two-way street, not a one-way  
19 street.

20           DR. GLANTZ: But you wouldn't require them to act  
21 before you would act?

22           DR. BECKER: In no way is harmonization require  
23 that as far as I can tell, no. And I don't think that's the  
24 intent.

25           DR. SIEBER: Let me just briefly repeat one other

1 obvious thing that the committee stated in the report.  
2 California has a set of laws, and we're obligated to do  
3 certain things. Prop. 65 has no federal analogy. So,  
4 always, we're going to have to do things that don't rely on  
5 some action at the Federal level. That's the nature of the  
6 beast.

7 DR. BECKER: To the extent that we're working on  
8 similar issues, there needs to be a dialogue, exchange of  
9 data, and analysis. I mean that's where I see the  
10 harmonization.

11 DR. FROINES: I want to make one comment. I think  
12 that it's important that one recognize that in the  
13 legislative history of AB 1807, that the Legislature  
14 actually passed 1807 precisely because of the weaknesses of  
15 the Federal Government -- particularly U.S. EPA -- in the  
16 area of air toxics.

17 And so, since 1983, the operating principle of  
18 this committee and this law has been that California has to  
19 be in the lead to deal with this question adequately. I  
20 would say that my experience with the two chemicals that  
21 I've dealt with as the lead -- perchloroethylene and  
22 methylene chloride-- are two compounds that California was clearly out in  
23 .S.  
24 EPA and did better science than U.S. EPA.

25 And I think that the principle that we do the best  
science here should be one that we take very seriously. And

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1 I think it's very good what Dr. Becker is saying. I think  
2 the committee was concerned about the issue of harmonization  
3 from the standpoint of will there be pressure brought to  
4 make things similar. What you're saying is good. I think  
5 this committee should pass a motion later to make that an  
6 explicit recommendation of this committee, though, so that  
7 we don't just leave it for others to decide; that we make it  
8 formal on our part.

9 But I think the notion, as stated, is certainly  
10 fine.

11 DR. BECKER: I'd refer you to the draft if you  
12 want further information on that. But I think Dr. Sieber  
13 summarized it, though. You know, to the extent possible,  
14 there should be consistency. And when there's not, there  
15 needs to be good scientifically valid reasons, explained  
16 clearly, so that people can understand what the reasons for  
17 those differences are. And it may be that California has a  
18 different climate, or there were regional differences, or  
19 other differences that need to be clearly explained.

20 DR. FROINES: Rick, one of the things that's  
21 important to know is that since the passage of the Clean Air  
22 Act, U.S. EPA has never been proactive on the issue of air  
23 toxics. In some respects, they -- if you talk about  
24 weaknesses in epidemiology, well, they're tenfold for U.S.  
25 EPA. And if you talk about weaknesses in exposure, they're

1 equally tenfold more than Cal-EPA.

2 In fact, we have better and more resources in  
3 those two areas in some respects than U.S. EPA has even now  
4 given the size of their budget.

5 DR. BECKER: Let me just respond very briefly. I  
6 think it's well recognized that California is the leader in  
7 the nation and the leader in the world in their air  
8 programs, both from the monitoring and from a regulatory  
9 standpoint.

10 I think with lead -- again, if I could just jump  
11 ahead a little bit -- that the ARB had tremendous foresight  
12 in being the first in the nation to lead the phase-out of  
13 lead in gasoline. And this has had a dramatic effect on the  
14 blood lead levels of children. So, I don't believe that it  
15 could be interpreted as diluting, if you would, the efforts  
16 of California to maintain and enhance the high quality of  
17 standards.

18 The way I interpret it is that we need to look at  
19 the same data sets and exchange these types of analyses. If  
20 our analyses win the day, if you would, in terms of the  
21 science, then that should go forward. And there's no reason  
22 to, I think, consider harmonization to be exactly -- someone  
23 used the term "lock step" with the different organizations.

24 There are different constituents that we serve and  
25 a different environment.

1           DR. FROINES: I want to make one final comment  
2 before we go ahead. I think that in terms of the overhead  
3 that you showed about resources and using our resources most  
4 effectively, one of the things that we are very different  
5 than U.S. EPA on is the fact that in the -- we have the  
6 University of California, and we have enormous scientific  
7 expertise in all the nine campuses, and that what we see  
8 ourselves in is a partnership between State agencies and the  
9 University in terms of developing the best science.

10           And so, I think it's important that OEHHA make use  
11 the University of California expertise even more than you  
12 already do, because I think it's a resource that is  
13 unparalleled in the United States.

14           DR. BECKER: I think the committee members who  
15 participated would share that analysis. And indeed, in  
16 their recommendation really does specifically speak to  
17 encouraging Cal-EPA to reach out to the experts.

18           And primarily, as you know, the University of  
19 California has long been the research arm of the State  
20 Government. So, we would see it as an enhancement of those  
21 interactions. And that's very important for improvement of  
22 the quality of science.

23           DR. SIEBER: Someplace in the document it  
24 specifically mentions the University of California. Of  
25 course, it's not exclusive. It mentions other resources



1 available in the State. But that is definitely emphasized.

2 I think in one of Rick's previous overheads, he  
3 talked about ways to reduce uncertainty. And in the same  
4 regard, there's times when you simply need to go out and get  
5 some more data. You don't have enough data. At some point  
6 you have to say, "I don't have enough information here."  
7 And the University and other organizations were specifically  
8 mentioned in that regard as well.

9 DR. BECKER: I'll go back to this one. On risk  
10 characterization, improve the characterization of  
11 uncertainty and variability. This is very much consistent  
12 with the National Academy of Sciences report on risk  
13 assessment. In fact, several members of the National  
14 Academy of Sciences participated on an expert panel, in  
15 fact--

16 DR. SIEBER: Dr. Witschi.

17 DR. BECKER: -- and Dr. Sieber, of course, as  
18 well.

19 These last two are stressed that there's a real  
20 need that we sometimes, as scientists, fall down upon, and  
21 that's how we communicate this information to the public.  
22 And that's something that's a real talent for -- not just  
23 getting the science right, but working on the communication  
24 and interaction. So, that was a key point in the risk  
25 characterization.

1           DR. FROINES: One thing has to be said about this.  
2 We talk a lot about doing better science, and we talk a lot  
3 about how to do better with the X, Y, Z issues of  
4 uncertainty, and variability, and what have you. But the  
5 key issue is the data we have to work with from the  
6 beginning; that is, the toxicologic data and the  
7 epidemiologic data is what makes any risk assessment  
8 possible.

9           So, if we don't have the basic information, then  
10 we're going to spend all our time looking at uncertainty and  
11 variability. And I am concerned that one of the things  
12 that's happening in the United States is that we are doing  
13 less epidemiology and less toxicology to provide the basic  
14 data to use for risk assessment, and that our emphasis on  
15 new methods in risk assessment and on new ways to do risk  
16 assessment is a little bit like fixing the problem at the  
17 wrong end of the process.

18           And I think one of the things that has to happen  
19 is that OEHHA has to press for more toxicology and  
20 epidemiology so we have then a better database to operate  
21 from.

22           And everybody now is rushing towards doing basic  
23 research and improving issues of variability and  
24 uncertainty, and the database that we have to work with is  
25 going to shrink. It is shrinking. The dollars from the

1 Federal Government for testing are shrinking. And that's a  
2 serious issue for us, because it means that we won't have  
3 enough to really do very much with this kind of thing in the  
4 future.

5 DR. SIEBER: Exactly. And I don't think you meant  
6 to exclude exposure data, because I think one of the  
7 concerns that Jim Pitts and I had was that we're relying too  
8 much on models that will not have basic exposure data. So,  
9 it goes in all parts of risk assessment.

10 DR. BECKER: One of the things that's important  
11 and near and dear on everyone's part is the collection and  
12 use of data. And if you hear from seven different boards  
13 and departments from Cal-EPA, you find they all have  
14 different data collection systems historically and for one  
15 reason or another. And there was some real question about  
16 the useability of that data.

17 In fact, I think there was some testimony that  
18 provided that, as data reports came in, they looked at them  
19 once and put them on a shelf. And, as far as they know, no  
20 one ever looked at them ever again. And that was of great  
21 concern because of the time, and expense, and trouble of  
22 collecting that data, and then it was not readily utilized.

23 So, there was a broad cross-cutting recommendation  
24 that there be a review of how data is collected, what data  
25 is collected, and what it's used for, and try to figure out

1 if there are ways to make the data more available. I think  
2 that captures the gist of the committee's recommendation.

3           Particularly access to this -- maybe as we move  
4 from -- I think this is, again, partly my philosophy. As we  
5 move from a single media evaluation to more of a multimedia  
6 evaluation, it's important to be able to access the data  
7 from the various different media, and that's where I think  
8 this really will be helpful.

9           Well, what's next? Well, we have the committee  
10 draft report. There was public review and comment on that  
11 draft report, and we intend to have the final report  
12 released very, very soon. And one of the successes that  
13 we've had in terms of distribution has been posting this  
14 report on our home page. And so, we have received  
15 tremendous accolades, if you will. This was one of our  
16 first major efforts with delving into the internet. And by  
17 posting it on our home page, the report becomes immediately  
18 available worldwide. And from our standpoint, it also saves  
19 us a tremendous amount of resources.

20           So, in terms of that, we're getting very close to  
21 that effort. And then, of course, there's the  
22 implementation phase. And the exact processes of  
23 implementation have not been laid out either within OEHHA or  
24 Cal-EPA, but I included -- I will include just a few of  
25 these things that we're undertaking at this point in time.

1           I would say I put these together, because our  
2     efforts are strategic planning efforts. Our efforts are  
3     consistent with the RAAC recommendations. And these are  
4     some of the ones that I pulled out that the Office of  
5     Environmental Health Hazard Assessment is employing at the  
6     present time.

7           The first is that we were encouraged by the  
8     committee to develop a memorandum of understanding with our  
9     counterpart at the U.S. EPA, Bill Farland's group at the  
10    National Center for Environmental Assessment. So, we're in  
11    the process of negotiating that MOU. And this is the MOU  
12    that would provide for greater consistency or harmonization,  
13    exchange of information, and exchange of peer reviewers,  
14    exchange of documents, working more closely together, if you  
15    would, between our scientists.

16          A very strong recommendation was to enhance peer  
17    review and peer involvement. And in our efforts with that  
18    was to open the processes up as much as we can, to solicit  
19    and involve our peers from academia, from industry, or  
20    research institutions in the process as early on as we can,  
21    of course, to collect and analyze data.

22          And so, we're looking at ways that we can improve  
23    in that regard. We've established this year a few matrix  
24    teams of staff level scientists from the various sections  
25    that we have within OEHHA to do very focused projects. One

1 of them is to look at this tiered risk assessment. And this  
2 is one of the recommendations of the committee, that there  
3 be -- risk assessment is an iterative process. The  
4 committee recommended that there be a way to look at -- if  
5 you could have tiers in this risk assessment, maybe a  
6 screening level analysis, and then an intermediate step, and  
7 then more advanced types of analysis.

8 And we have our process of assembling a team of  
9 scientists to try and look at that. And this is within  
10 OEHHA at the present time.

11 The other thing we're doing is trying to establish  
12 a pilot project. You know, U.S. EPA came out with new  
13 cancer guidelines. We've got a prototype, but we're not  
14 sure of how it's really going to function. So, we'd like to  
15 get a team together of a few -- again, a few staff  
16 scientists, work on a chemical of concern, of course. We're  
17 not going to work on a chemical that is not of concern. And  
18 let's take those for a test drive and see where the holes  
19 are and see where we can fit in some of our particular  
20 expertise or guidance to fill those gaps.

21 DR. GLANTZ: Can I?

22 DR. BECKER: Yes.

23 DR. GLANTZ: I'd like to ask a question about the  
24 second one, which would be enhancing peer involvement. One  
25 of the more successful protocols and procedures that the SRP

1 put in place years ago was good communication between the  
2 SRP and the staff, the OEHHA and ARB staff, such that the --  
3 when these reports have been prepared, the key SRP people  
4 looked over the reports informally as part of the internal  
5 review before the reports were sent up for policy review.

6 And the reason for that was to try to catch things  
7 that were red flags from the SRP's point of view before the  
8 document was actually issued to try to save time, and save  
9 work, and save steps. And I think it's been quite  
10 successful.

11 Well, a day or two -- I think it was yesterday or  
12 the day before, I called up Lauren Zeiss, who's in charge of  
13 the second-hand smoke reports, and asked her what the status  
14 of it was. I realize that's another agenda item. She said,  
15 basically, they were done.

16 And I said, "Well, can I get a look at them before  
17 they go out to, you know, to see if there's any problems  
18 with them. And I was told, no; that management had said  
19 that that wasn't permitted.

20 What's changed? Why?

21 DR. BECKER: I don't know that anything's changed.  
22 This is news to me. But I'll be glad to ask if Bill Vance  
23 has any comments. Bill, maybe you can comment on that.

24 DR. VANCE: Sure. Dr. Glantz, I'm fairly new in  
25 my position, but I am now responsible for the work products

1 that come out of the four scientific sections in OEHHA.

2 And I feel it's my responsibility to take a  
3 management level review of these documents before they are  
4 put out for public comment and review. There's a lot of  
5 things that I like to look for in these documents. One is  
6 clarity, readability, and consistency.

7 DR. GLANTZ: I understand. But that's not the  
8 question. And that's totally appropriate. And that's the  
9 way it's always been.

10 DR. VANCE: Okay.

11 DR. GLANTZ: But the thing which is different now  
12 was that it used to be that before the documents were sent  
13 forward for management review, the key SRP people took a  
14 look at them for technical aspects to make sure that the  
15 science straight or at least raise any issues that they  
16 expected the SRP -- they were basically speaking on behalf  
17 of the SRP to raise any technical issues that they thought  
18 were going to be problems, so at least OEHHA and/or the ARB  
19 would have the benefit of sort of an advanced warning where  
20 these issues were so they could be fixed, if OEHHA thought  
21 it was appropriate, before the documents went up for  
22 management review and went out for public comment.

23 And the feeling was that it was -- and the reason  
24 that this practice evolved -- and I've been on this  
25 committee longer than I care to remember, although not as



1 long as some of members -- was because reports were issued,  
2 sent out for public comment. They would revise -- it was a  
3 very extensive process.

4 And then they would come to this committee, and  
5 then issues would be raised. And by raising them early in  
6 the process, it just saved a lot of work and a lot of time.

7 And so, I again ask the question. In the past,  
8 when these reports were finished in sort of final internal  
9 draft form prior to management review, they were circulated  
10 to the appropriate SRP people to just look at them from a  
11 technical perspective. And in some cases, people said this  
12 is cool; in some cases, a lot of issues were raised.

13 Why isn't that being done with the ETS reports, or  
14 have you changed your policy on everything?

15 DR. VANCE: I'm not aware that that is a policy,  
16 Dr. Glantz.

17 DR. GLANTZ: I can tell you that it's been the  
18 practice for the last many years. I've been the lead on  
19 several documents.

20 DR. FROINES: He's saying that the policy hasn't  
21 changed.

22 DR. GLANTZ: Oh, okay. That means that the SRP  
23 can see these reports?

24 DR. VANCE: That is not what I said.

25 DR. GLANTZ: Oh.

1 DR. VANCE: I would like to correct that, Dr.  
2 Froines.

3 I'm not aware that that is a policy in OEHHA; that  
4 our internal documents that are in draft form are released  
5 outside of our department or outside of Cal-EPA for review  
6 prior to a management level review. I'm not aware of a  
7 policy that allows for that.

8 I would be -- it's my prerogative, I believe, to  
9 take a first cut at these documents from our scientific  
10 sections before they go for external peer review.

11 DR. GLANTZ: So, I think -- would it be fair then  
12 to say that you're changing the practice? Because I've -- I  
13 mean I've reviewed many of these documents at that stage.

14 DR. FROINES: Stan, I don't know agree with that  
15 way you characterized it, because what has happened in the  
16 past and was stated explicitly in the past between this  
17 committee and the agencies was that the process of  
18 developing the documents was an iterative process; that the  
19 leadperson for the committee worked with the staff  
20 developing the document to ensure the best quality science  
21 was being put into that document.

22 That's the way we have all worked on this  
23 committee. We have always been an integral part of the  
24 process of development of the document to ensure the best  
25 possible science. So, there's never been a question of our

1 seeing a document before it went to management. It's been  
2 that we have known the scientific issues and what was in the  
3 documents as the process unfolded.

4 So that the notion that Stan says was that we were  
5 not reviewers but participants in the process to ensure  
6 scientific quality so we could minimize -- minimize  
7 documents going back and forth and being rejected by the  
8 committee.

9 So, it was for practical consideration to speed up  
10 the process that we adopted as practice. So, it's never  
11 been a question exactly of seeing the document before it  
12 went forward.

13 When I worked on methylene chloride and  
14 perchloroethylene, there were major pharmacokinetic,  
15 toxicokinetic modeling issues. And George and I, and a  
16 whole raft of others, worked together to resolve those  
17 issues as the process went along.

18 It would be very disturbing if we're hearing that  
19 that process is going to be changed.

20 DR. GLANTZ: Yeah. If I could just add, I totally  
21 agree with what he said.

22 DR. VANCE: Okay.

23 DR. GLANTZ: And all of the documents or all of  
24 the compounds that I've been involved with as the leadperson  
25 or a co-lead on, I mean, I've attended the workshops to the

1 extent I could. And, you know, the -- the most recent one I  
2 can remember -- one of the ETS documents -- maybe it was the  
3 exposure assessment. I can't remember. I mean, I raised,  
4 when I took a preliminary look at it, I raised a huge number  
5 of issues that ended up generating a lot of work before the  
6 thing ever got sent up the line.

7           And it would have frankly, I think, been a waste  
8 of management's time to have reviewed the thing I looked at,  
9 because it had a lot of problems with it. And so, I see  
10 this -- maybe there was a miscommunication, but it seemed to  
11 me that -- I was very surprised to the reaction I got the  
12 other day. And it seems to me that it goes directly against  
13 this middle recommendation (pointing to the overhead  
14 screen).

15           DR. BECKER: I think you characterized it  
16 correctly in terms of miscommunication. Our intention is to  
17 enhance peer involvement and to enhance peer review.

18           And part of our peer involvement process includes  
19 a very rigorous internal scientific peer review before  
20 documents are released to the public for public review.

21           DR. GLANTZ: Right.

22           DR. BECKER: I think we need to, and I'll be glad  
23 to. Bill and I can talk tomorrow and make sure this is  
24 really clear. But our efforts here are to really make sure  
25 it's a quality document.

1 DR. GLANTZ: So, does that mean that the draft  
2 documents --

3 DR. FROINES: Excuse me for interrupting. I want  
4 to be very clear. We don't count as public input.

5 CHAIRMAN PITTS: That's correct.

6 DR. FROINES: We're not the public input.

7 CHAIRMAN PITTS: That's a statute --

8 DR. FROINES: We are part of the process.

9 CHAIRMAN PITTS: -- a legislative mandate.

10 DR. BECKER: I used the term peer involvement.

11 DR. FROINES: No. It's more than that. These are  
12 our products.

13 CHAIRMAN PITTS: I have to sign the findings that  
14 are prepared. It's a legal document.

15 DR. GLANTZ: And so, it's just fairly troubling to  
16 me.

17 CHAIRMAN PITTS: Yes.

18 DR. GLANTZ: In the past, as these documents have  
19 involved -- and I've been involved in a bunch of them --  
20 anytime that there was a question, I was consulted, if it  
21 was appropriate. Anytime I had a question or wanted to see  
22 a draft of something to comment on it or to have some input,  
23 it got sent over.

24 This is the first -- I've been on this committee  
25 10 years. Okay? I think. And I can't remember --

1 CHAIRMAN PITTS: Put it closer to 13.

2 DR. GLANTZ: There's some uncertainty as my brain  
3 comes to maturity.

4 CHAIRMAN PITTS: Put a plus or minus on that, plus  
5 or minus the standard deviation.

6 (Laughter.)

7 DR. GLANTZ: I have never been told no when I've  
8 asked to see anything until a day or two ago. I mean -- and  
9 this is very troubling. I mean, is this a change in the way  
10 you guys have historically acted?

11 DR. VANCE: I think --

12 DR. GLANTZ: Maybe I should ask Dr. Becker.

13 DR. VANCE: Okay.

14 DR. BECKER: I think it's a point that we need to  
15 clarify in terms of miscommunication.

16 Our goal is to have, again as I stated, enhanced  
17 peer involvement and to have a very strong internal peer  
18 review process.

19 CHAIRMAN PITTS: But this would involve -- when  
20 you say "internal," this peer review process, the "internal"  
21 encompasses the SRP. We are not -- the public comments down  
22 the line for peer review.

23 DR. VANCE: Dr. Pitts, I never meant to imply  
24 that. All I'm saying is that I agree that these documents  
25 were meant for your reading.

1 DR. GLANTZ: So, does this mean --

2 DR. VANCE: Can I --

3 DR. GLANTZ: I'm sorry.

4 DR. VANCE: I act as the quality assurance person.  
5 I do the first screening of these documents before they come  
6 to your hands. We take great pride in our work. And I  
7 would like you to read a good document.

8 DR. GLANTZ: But what if I say, as I've said in  
9 the past, and as every member of this committee has said, we  
10 want to see it before it even goes that far? You know,  
11 because --

12 Well, let me just ask the question. If I were to  
13 ask, as a member of this committee, to see whatever  
14 documents that have been dumped on whoever's desk they were  
15 dumped on by Lauren, can I see them tomorrow or Monday?

16 I mean we've never handed -- nobody, as I know, on  
17 this committee when he's reviewed these internal review  
18 drafts -- I mean, they're not treated as public documents.  
19 They're treated as internal review drafts.

20 The ones I get, the first documents that I see for  
21 the compounds that I'm working on have "Internal Review  
22 Draft" stamped on them, not "External Review Draft" or  
23 "Interim Review Draft."

24 So, if I were to ask or if I ask you today, right  
25 now, could I see whatever it is you've got, the most current

1 versions as of Monday, when I get back to San Francisco,  
2 would you let me look at them and comment on them?

3 DR. VANCE: I would prefer to look at them first,  
4 make my comments, have those corrected, then they would come  
5 to you.

6 DR. GLANTZ: Okay. We understand that's what you  
7 would prefer.

8 DR. VANCE: Yes.

9 DR. GLANTZ: I'd prefer to look at them. Will you  
10 let me look at them?

11 CHAIRMAN PITTS: Well, maybe Rick has to make that  
12 decision.

13 (Thereupon, several persons smoke  
14 simultaneously.)

15 DR. FRIEDMAN: I have written some things which I  
16 wouldn't even want to show to the person in the next office,  
17 let alone somebody on a review committee. So, I don't think  
18 that you should assume that we committee members have the  
19 right to see every little draft or the most crude draft.

20 DR. GLANTZ: This isn't a crude draft. I mean  
21 this is the stage -- the stage that these documents are at  
22 right now, they are at least as far along -- these are the  
23 second revisions. They've already been out for public  
24 comment and revised.

25 So, this is not, you know, a rough draft written



1 on the back of some piece of toilet paper.

2 What I'm saying is, though, I've never -- in the  
3 ten years I've been on the committee -- been told no when  
4 I've asked to see something, never.

5 I've never been told -- I mean, never, never. So,  
6 this is the first time it's never happened. So. . .

7 DR. BECKER: Again, there may have been some  
8 miscommunication there.

9 CHAIRMAN PITTS: But there is some  
10 miscommunication.

11 DR. GLANTZ: No, he's said it very clearly.

12 CHAIRMAN PITTS: To give it a little perspective  
13 in this as to --

14 DR. GLANTZ: You've been on it for 13 years.

15 CHAIRMAN PITTS: Yeah, John Froines and I are sort  
16 of the surviving members of this, the pioneers. Much of  
17 this, I might say, evolved. These questions -- remember,  
18 John? Some of these questions really were present way back  
19 at the beginning, 13 years ago. And over time, the  
20 interactions, for example of the ARB in certain areas were  
21 not that closely coupled with and between the Panel.

22 And that actually caused some problems. But over  
23 time, we worked these out. And over the last ten years,  
24 they've been really relatively smooth. And the process has  
25 evolved.

1           And one of the reasons that the process -- and one  
2   of the reasons that Stan, and John, and the rest of us feel  
3   that it's extremely important to get involved is not from  
4   our interest, but for the interests of the agencies -- OEHHA  
5   and the ARB -- and for a very good reason. If you want  
6   these documents, as you say, if you want the state of the  
7   art of the science, you have to have interactions early on  
8   in the preparation of the document with people who are  
9   involved with personally or know who's involved with -- gee,  
10   I really didn't do a rate constant on that reaction for a  
11   certain compound, but I can tell you who does know and who  
12   can calculate that.

13           I'll put you in touch with somebody. In other  
14   words, we provide a very important function of being an  
15   interface between the staff, who are not having the fun we  
16   have doing research, and publishing the research, and in  
17   contact with the literature.

18           And so, this allows us to produce a document then,  
19   and which we have done, which is truly state of the art by  
20   these interactions.

21           Whereas, if you simply rely on staff -- rely on  
22   reading the literature, reading the reviews -- and reviews  
23   can be very biased to the reviewer, and it's tough.

24           So, we went through all of this 13 years ago.  
25   And I remember talking photochemistry and atmospheric

1 chemistry with acetaldehyde, that happened to be my bag.  
2 And I listened to the toxicologists, and I hear things from  
3 my peers. This is the latest in this. So, that's my real  
4 point. It 's really important. We have been working under  
5 the very principles that you people are proposing in this  
6 document.

7 DR. BECKER: Well, again, to restate: Our goal is  
8 to enhance peer involvement, and to enhance external  
9 scientific peer review. The only point I would like to make  
10 in defense of Dr. Vance is that he does make a point about  
11 quality assurance.

12 And so, I think that it's a legitimate point that  
13 he can assure the quality. But again, I would like to  
14 state, Dr. Glantz, that perhaps this was a miscommunication.  
15 I'll be glad to make sure that Lauren and myself and Bill  
16 sit down and iron this out, and get back to you on Monday.

17 DR. GLANTZ: Right. I think -- I appreciate that.  
18 But I think that if you change the operating procedures  
19 which have evolved over the last 13 years -- which this is  
20 a change in those procedures -- and those are procedures  
21 which have evolved in a way that I think has led to a very  
22 high-quality product in the end. You know, after all the  
23 public comments and meetings, after all this has gone  
24 through, we have put out reports that I think everyone can  
25 be proud of.

1           And that's the reason we, all of us, stay on this  
2 Panel. We were discussing before the meeting if we'll ever  
3 get up to getting paid minimum wage for it.

4           But the point is, it's very troubling if these  
5 things are not shared when we ask to see them. You know? I  
6 don't care what level they're at. I see lots of -- I have  
7 never seen any drafts come out of OEHHA that was crummy as  
8 some of my students,

9           And I think it's very important that there be a  
10 clear policy statement on your part as to what you think it  
11 should work. Because it worked well and it served the goals  
12 of this committee. You, yourself, said that the SRP process  
13 is one of the models that you were looking for. And I think  
14 it's a very serious problem.

15           And I think that it's an abuse of your -- or not  
16 an abuse of your prerogative; it's clearly not. But I think  
17 that it's a change in procedure that's going to reduce the  
18 scientific quality of the work and it's going to drag the  
19 process out and waste time, money, and effort on everybody's  
20 part.

21           DR. VANCE: Dr. Glantz, I assure you, it will not  
22 reduce the quality of the work, and it will not drag it out.

23           DR. GLANTZ: I'm not accepting it, because if  
24 somebody changes a procedure on me, I want to be told about  
25 it. And I don't think it's acceptable to change the

1 procedure. I want, speaking as a scientist, to be a  
2 participant in the process of developing these documents.  
3 And if I'm told that I cannot see a draft report that I  
4 worked on, that's not acceptable. And it's not acceptable  
5 for this committee.

6 DR. BECKER: We heard you loud and clear, and I  
7 will make sure that Bill, and I, and Lauren sit down and  
8 talk this out, and make sure there is no miscommunication  
9 out there.

10 CHAIRMAN PITTS: I don't think Lauren's involved.  
11 I think this is a high level management decision that has to  
12 be made, perhaps above your level -- I'm serious about this.  
13 Because we can't function -- I don't see how we can function  
14 or I, as Chair, can function in the situation that you've  
15 described. Because we were 13 years, and we have presumed,  
16 and we are -- it is a function which will -- which will  
17 degrade the ability of OEHHA, and the ARB, and the SRP to  
18 protect public health from airborne toxics. It's just that  
19 basic.

20 It's a real fundamental gut issue in airborne  
21 toxics. Are we producing -- are these agencies producing  
22 the finest risk assessments that can be produced, state of  
23 the art, where you've covered from people involved across  
24 the spectrum -- the staff, the researchers outside of it.  
25 And if we cannot do that, this is a very different ball

1 game, and it has to be understood that it is a different  
2 ball game, and that has to be resolved at whatever levels,  
3 Rick, that you want to resolve it.

4 But the level, at least as I see it in a sense --  
5 I don't know if I'm speaking for the Panel, but I think I am  
6 -- am I speaking for the Panel? Is there general consensus,  
7 then, that this must be the case?

8 DR. GLANTZ: Yeah. I mean we have viewed these  
9 reports in many ways as our reports. We're the ones who  
10 have to give the final approval.

11 CHAIRMAN PITTS: That's the law.

12 DR. GLANTZ: He's the one --

13 CHAIRMAN PITTS: That's the law.

14 DR. GLANTZ: He has to sign, you know. And to  
15 that, you've added another problem I want to raise. And  
16 that is on the lead document.

17 DR. BECKER: Dr. Glantz, that will be coming up  
18 later.

19 DR. GLANTZ: Well, no, this is --

20 DR. BECKER: Okay.

21 DR. GLANTZ: -- the same thing. On the lead  
22 document, I have spent more time on this document than I can  
23 count. About a week ago, I went through the Part B, and I  
24 sent a letter to Dr. Pitts, and then it was forwarded on to  
25 you with a bunch of basically points of clarification that I

1 felt needed to be made in the document, and got back  
2 yesterday or the day before the responses to the specific  
3 issues I raised, which were by and large very responsive and  
4 very helpful.

5 But there were two items where there was no  
6 response. Okay? One of them had to do with the  
7 never-ending concern about how to characterize the  
8 uncertainty. And I called George up and talked to George  
9 about it, and he convinced me that they had already done  
10 what I wanted, and I just didn't read it carefully enough.

11 And I have now gone back and read it, and I agree  
12 with you, George, with one minor editorial change to avoid  
13 the confusion.

14 But the other point that I raised was a -- in the  
15 report, one of the issues in the report has to do with  
16 effects on I.Q. and neurotoxicity. And there was sort of a  
17 general statement in there that there were a couple of  
18 papers by a guy named Schwartz and Salkever about the  
19 effects of these changes in terms of economic impacts and  
20 productivity, and lost wages, and stuff like that.

21 And one of the things I asked for is, I said, add  
22 a couple of sentences at the end of the paragraph at the top  
23 of the page explaining how the application of the Schwartz  
24 and Salkever would affect California in terms of lost wages  
25 and labor participation. This information should also be

1 added to the Executive Summary.

2 And nothing was provided. And when I asked George  
3 about that -- and I hope I'm not getting you in trouble,  
4 George, he said he was ordered not to answer that one. Now,  
5 I find that very troubling.

6 DR. BECKER: I'll ask Bill Vance to answer that.

7 DR. VANCE: All right. This is the situation,  
8 that what we produce in Part B is a health assessment.

9 DR. GLANTZ: Uh-huh.

10 DR. VANCE: What you requested is the next level  
11 of assessment, which is an economics analysis.

12 DR. GLANTZ: Uh-huh.

13 DR. VANCE: It wasn't clear to me that that was  
14 part of the health assessment.

15 DR. GLANTZ: But you see, again, we're the ones  
16 who have to approve this document. And I think that's --  
17 that's the judgment we're here to make.

18 We have spent -- I've been on this committee ten  
19 years, and had the difference between risk assessment and  
20 risk management pounded into my brain. And I think that's a  
21 good distinction.

22 I think that we -- our job here is to put the best  
23 science we can, in the face of great certainty, out there  
24 for other people to deal with. And I think that the  
25 judgment of what belongs in these reports, that's a judgment



1 for us.

2 I mean, we function -- I mean, I serve as an  
3 associate editor of a cardiology journal. And it's very  
4 much the same function of managing the peer review process  
5 that we're playing here. And if we go back to an author and  
6 say, "We want you to include this information in your  
7 paper," they include it. They don't say, "Well, we thought  
8 about it and we don't feel like it."

9 They either include it -- if they say that, we  
10 just say, "Fine. We'll reject your paper." Then it's okay.

11 Now, they can come back and say, "Well, we think  
12 the reviewer or the editors are nuts for wanting this, and  
13 we think it's not appropriate, and we think they're wrong,  
14 and here's the evidence for it."

15 And sometimes, as an editor or reviewer, you say,  
16 "Well, okay. I was wrong. Let it pass." Okay?

17 There are other times when you say, "Thank you for  
18 your opinion. Put it in or we won't publish the paper."  
19 Okay?

20 And you didn't even come back and make that  
21 argument. You just simply ignored it. And I put a lot of  
22 work into these documents and spend a lot of time working on  
23 this, for which I am paid about five cents an hour. Okay?  
24 And I don't like simply being ignored. And I think that  
25 when you look at this kind of behavior in the context of the

1 refusal to allow the SRP to see these documents early in the  
2 process, documents which have already been out for public  
3 comment -- I mean, I'm very, very concerned that there's a  
4 change in the way things are functioning over there.

5           And I happen to think and, as I said earlier, one  
6 reason I have stayed on this committee so long, and it's a  
7 lot of work, is because of the quality of the product which  
8 is produced, and because of the peer relationship with some  
9 very good scientific staff that you've got working for you.

10           And I think you need to rethink, you know -- not  
11 to be too obnoxious about it -- but you need to rethink the  
12 way you're running that place, because I think you're in for  
13 some real problems with me at least. And I think, if your  
14 goal is to enhance the quality of your product, you need to  
15 deal with the oversight of these products and the peer  
16 review that this committee produces in a way for people who  
17 have the ultimate responsibility for approving the report.

18           And, you know, I think -- I've heard your answer  
19 to that, and I don't agree with that. A couple of sentences  
20 to that point need to be in that document to understand what  
21 the true impact of that lead exposure is.

22           Now, if the risk management people look at that  
23 and say, "Well, that's nice. We don't care." Or, "That's  
24 not enough to worry about," or whatever. "That's a trivial  
25 cost, or even if it's a huge cost. . ." -- the cost of

1 dealing with it in the future, that is not my problem; that  
2 is not my business.

3 But, you know, I would like to see those two  
4 sentences written and put in this document if we have to  
5 write them ourselves in this meeting.

6 DR. VANCE: Dr. Glantz, you will not have to write  
7 yourselves.

8 DR. GLANTZ: Thank you.

9 DR. VANCE: Okay. I think what we have to be very  
10 careful about here is that we are now going beyond a health  
11 assessment in Part B.

12 If the committee wants to consider economic  
13 impacts, they might have to think about an additional  
14 document.

15 DR. GLANTZ: Well, I'm sorry. No. That's not  
16 correct. The health -- you know, we're looking at drops in  
17 I.Q. We're looking at --

18 CHAIRMAN PITTS: Could you read those two lines so  
19 the audience could hear what you're talking about.

20 DR. GLANTZ: Let's pull the document out.

21 DR. FROINES: I just want to make one comment. I  
22 don't know how I feel about the economic issue. But I  
23 really feel that when an SRP member raises a question, it  
24 should have an answer; it should not be ignored. That is  
25 disrespectful, and I won't tolerate that. That's

1 unacceptable.

2 DR. VANCE: It was not meant to be disrespectful.

3 DR. FROINES: It was. It was disrespectful,  
4 because you ignored his question. You cannot do that.  
5 Let's leave that as a given and go on with the discussion.

6 DR. GLANTZ: Okay. Just so the audience knows  
7 what we're talking about, I'll just read it. They're  
8 talking about the effect of lead on I.Q. And they say that  
9 the current -- it's some level, I don't know if it's a hot  
10 spot or the ambient air, whatever it is. And they say  
11 there'll be a total decrease of a certain number of I.Q.  
12 points with a range of a certain amount. And then it says,  
13 "Recent research, Schwartz and Salkever. . ." and I notice  
14 the Salkever citation was added in the revision, which is  
15 fine, ". . .provide some insight into the implications of  
16 I.Q. loss in terms of lost wages and labor force  
17 participation."

18 Now, that's in your document that you handed to  
19 me. Okay?

20 And I then said, "Add a couple of sentences at the  
21 end of the paragraph explaining how the application of  
22 Schwartz and Salkever's work would affect California in  
23 terms of lost wages and labor force participation."

24 So, all I'm asking for here is to take a statement  
25 that's in the document and just put it into the context of

1 California, which is what everything else in this document  
2 is done by.

3 And I don't see that as spilling over into  
4 cost/benefit analysis, or risk management, or anything else.  
5 It's asking to provide a bit of information which will help  
6 the risk manager get some assessment of what does this  
7 really mean, you know?

8 And I would hope that maybe over lunch you could  
9 write me those couple of sentences, because George and Bart  
10 and those guys know more about this than I do. But, you  
11 know, I just think your statements reflect a fundamental  
12 misunderstanding of the way this whole process works.

13 DR. VANCE: Dr. Glantz, we have the analysis, and  
14 we have the sentences written.

15 DR. GLANTZ: Excellent! That will save us all a  
16 lot of time.

17 DR. VANCE: Our concern was, again -- and please  
18 don't interpret this as disrespect --

19 DR. GLANTZ: Okay.

20 DR. VANCE: -- that the sentences that are written  
21 will be dollar amounts.

22 DR. GLANTZ: Okay.

23 DR. VANCE: Okay? It was my opinion that that  
24 went beyond health effects. Though dollar impact is a  
25 consequence of the health effects, we're getting just a

1 little bit off the track now with the focus of a Part B  
2 health assessment.

3 DR. GLANTZ: Okay. Well, I think that the  
4 sentence should be there. Now, if you want to ignore it,  
5 that's -- once these reports leave us, God knows what  
6 happens to them.

7 DR. VANCE: Dr. Glantz, I assure you, at the  
8 direct request of this committee, we have the sentences  
9 prepared, and we'll provide them to you today.

10 DR. GLANTZ: Thank you.

11 DR. FROINES: I have a problem with that Stan's  
12 saying. You know, I don't want to get into where everyone  
13 in the world is going to come in and say, now we have to be  
14 able to comment on the economics of this thing. I hope we  
15 aren't opening "Pandora's Box."

16 DR. VANCE: You're opening "Pandora's Box."

17 DR. FROINES: Because there are a lot of people  
18 who would like to slow these things down.

19 DR. GLANTZ: What I had expected to see there was  
20 something saying that it would affect the number of -- this  
21 number of people would be impacted, and there would be this  
22 many additional lost days of work or something. And to me,  
23 that's a health effect, you know?

24 I wasn't thinking in terms of dollars. You don't  
25 have to put a dollar sign in there. But how many people are

1 going to be impacted? We have how many people are going to  
2 be impacted with neurotoxicity. We have how many people are  
3 going to be impacted for potential cancers. We have how  
4 many people are going to be impacted with a variety of  
5 cardiovascular end points.

6 And I think it's completely reasonable to put in  
7 how many people are going to be impacted in terms of their  
8 labor force participation.

9 DR. VANCE: Okay.

10 DR. GLANTZ: If you don't want to put a dollar  
11 sign on it, I don't mind that. Let somebody else worry  
12 about the dollar sign. What I had in mind here was the  
13 numbers, just like the numbers you have for all of the other  
14 end points.

15 DR. VANCE: Okay. Then I misunderstood. We'll  
16 have that.

17 DR. GLANTZ: Thank you.

18 CHAIRMAN PITTS: Now we have communicated.

19 Dr. Byus?

20 DR. BYUS: I just wanted to say that I had the  
21 same thought when I read the document over several days ago  
22 about having the Schwartz data, at least several sentences,  
23 included, mainly about the lost labor force rather than the  
24 dollar figure, as an indication of the health effects of the  
25 cumulative loss of I.Q. I thought it was very appropriate

1 to put that in.

2 CHAIRMAN PITTS: Jim, Dr. Sieber?

3 DR. SIEBER: Maybe we could get back on the track  
4 of wrapping up the risk assessment in the committee report.  
5 And then I just wanted to point out, in case the audience is  
6 confused by this, the --

7 (Laughter.)

8 DR. SIEBER: -- the risk assessment, the committee  
9 recommends an open, transparent process with public  
10 involvement, workshops, peer review; everything is on the  
11 side of public involvement and transparency in risk  
12 assessment.

13 Now, how the Scientific Review Panel does its  
14 business is really a separate thing. And there's nothing in  
15 the Risk Assessment Advisory Committee report that speaks to  
16 any of the discussion that's gone on. This is how this  
17 committee works with staff and the different agencies; is  
18 that correct?

19 And I didn't want to get put in the position where  
20 the Risk Assessment Committee had said something that  
21 somehow was being used to change or modify the policy of  
22 openness, and perhaps you can pick it up.

23 CHAIRMAN PITTS: I might just add one more thing  
24 in regard to the report. It did compliment, I believe, the  
25 SRP on its effectiveness in putting out documents that were



1 scientifically sound, directed to the protection of public  
2 health from a public health aspect.

3           And so, from the presumption that they felt it was  
4 a model perhaps; then, in the model you see, that's what our  
5 concerns are, the model and how it has developed and is  
6 operating successfully. So, you can see our concerns in a  
7 major -- what we consider to be a major change in the mode  
8 of operation this represents. Okay?

9           DR. BECKER: I just reiterate that our goal is to  
10 enhance peer involvement and peer review, and enhance that  
11 level of communication. So, to the extent we have room for  
12 improvement, it's my goal, our vision, our objective to  
13 improve. And I think that's clearly where we're headed.

14           I'll do one more slide and then I'll end here.  
15 One of the things that we're working on actively -- and this  
16 is getting back to efforts that OEHHA has that complement  
17 the recommendations of the Risk Assessment Advisory  
18 Committee or are consistent with that. It has to do with  
19 training and improving the interface between the risk  
20 assessors and the risk managers.

21           The Risk Assessment Advisory Committee made a very  
22 strong point that there needs to be training for two  
23 reasons: One is that our own staff can stay up to date on  
24 scientific developments, so there was a recommendation about  
25 continuing education. And the other is to enhance the

1 training and understanding of the risk managers in risk  
2 assessment, so they can use these tools effectively and more  
3 effectively in making their risk management decisions.

4           The other effort that we have undertaken is one  
5 that dates back some time ago, at least to 1988 or so, when  
6 we were all part of Health Services, there was a  
7 coordinating group put together to try and coordinate the  
8 efforts of these various programs in the Department of  
9 Health Services to address at that point the chemical risk  
10 assessment issues.

11           That group will evolve or has evolved into the  
12 risk assessment coordinated work group -- and it is  
13 comprised of scientists, technical level staff from all the  
14 various boards and departments -- to come together and to  
15 try and coordinate their efforts in risk assessment, whether  
16 it's exposure assessment, or toxicity assessment, or hazard  
17 identification, or dose response evaluations.

18           And again, part of this reason is that we are  
19 taking more and more of a multimedia viewpoint on  
20 environmental contamination. This is what the data is  
21 telling us; that you can't just look up in the air, can't  
22 just look down at the soil, or can't just go into the water.  
23 You have to consider things as a whole. And this is one of  
24 our efforts to try and coordinate that.

25           One of these efforts will be -- the committee has

1 a very specific recommendation -- they seem to be satisfied  
2 with how this working group is functioning -- that there  
3 should be a subgroup or a similar type of group that deals  
4 specifically with exposure assessment across the various  
5 boards and departments.

6 And this was important, because it did appear that  
7 while the -- maybe the risk assessors and the toxicologists  
8 were talking, the exposure assessors maybe were not talking  
9 as much across these different boards and departments.

10 So, that would increase the consistency and help  
11 us leverage our knowledge across the various media.

12 DR. FROINES: I haven't told Jim yet, just in that  
13 respect, we have formed a Southern California Exposure  
14 Assessment Group made up of people from UCLA, USC,  
15 Riverside, and hopefully Irvine. I think that group -- it  
16 meets every other month to deal with research issues in  
17 exposure assessments. So, I think that group would be very  
18 interested in interacting with you.

19 DR. BECKER: And we would be very interested in  
20 interacting as well.

21 Well, on that note, I guess I will end my  
22 presentation of the Risk Assessment Advisory Committee. I'd  
23 like to ask Tom McDonald just to come up briefly. We have  
24 here -- and this is not on the agenda, Dr. Pitts. I hope  
25 you'll indulge me.

1           On behalf of the Office of Environmental Health  
2 Hazard Assessment and indeed of all Cal-EPA, we would like  
3 to take this opportunity to present this very small token of  
4 our appreciation to Professor Sieber for his dedication,  
5 hard work, and untiring efforts to share and bring to  
6 fruition this very important process -- a comprehensive  
7 external peer review of Cal-EPA's risk assessment practices.

8           The work of this committee will really serve to  
9 help guide us and keep us, California and our environmental  
10 assessment groups, in the forefront. And this is very, very  
11 important. For that, Dr. Sieber, we thank you immensely.  
12 Thank you.

13           DR. SIEBER: I didn't know this was coming.

14           (Applause.)

15           DR. SIEBER: I feel like -- first of all, let me  
16 reiterate. I didn't know that was coming. Thank you very  
17 much, Rick.

18           We did what amounted to a year-long assessment of  
19 risk assessment activities in the State of California. It  
20 was time consuming. It was a lot of work and a very  
21 interesting process.

22           But one group wasn't mentioned this morning. I  
23 think it was by Rick, but let me reemphasize it. It was the  
24 participation of State staff in the entire process. These  
25 were folks from the Air Resources Board, many of whom are

1 here in the audience. I'll just mention Genevieve Shiroma,  
2 Joan Denton, and others who were actively involved in the  
3 process; from the OEHHA group, Lauren Zeiss, George  
4 Alexeeff, Tom McDonald. Rick himself was a staff member  
5 then. He was not Director of OEHHA. He participated in all  
6 the meetings.

7 And I have to say, in this State, we can be  
8 unusually proud of the expertise and the interest and  
9 dedication of our State staff.

10 So, our discussion on the lead interaction I think  
11 kind of runs counter, because obviously the State staff is  
12 participating in these types of activities to the fullest  
13 extent.

14 I can say categorically, they were not held back  
15 in any respect. So, we want to make sure that kind of give  
16 and take between the scientific community, the peer  
17 reviewers, the risk assessors, and the State staff continues  
18 in the future. It was an excellent activity on behalf of  
19 the State staff, on the part of State staff.

20 And I don't know, Rick, you got a letter from  
21 Senator Calderon.

22 DR. BECKER: Actually, I didn't bring it.

23 DR. SIEBER: Well, I'd like to give it to you.

24 DR. BECKER: I just got word of it this morning on  
25 my way here.

1 DR. SIEBER: Jim, I don't know whether it's  
2 appropriate or not, but --

3 CHAIRMAN PITTS: I think it is appropriate.

4 DR. SIEBER: I think it should at least be  
5 mentioned, and perhaps Rick would like to quote from the  
6 letter.

7 CHAIRMAN PITTS: Why don't you quote it, Rick?

8 DR. BECKER: You want me to read the entire  
9 letter?

10 CHAIRMAN PITTS: Sure.

11 DR. BECKER: It's directed to me as the Director  
12 of OEHHA. It's signed by State Senator Charles Calderon,  
13 dated October 30th.

14 "Dear Dr. Becker:

15 "As the author of SB 1082 (1993), I want  
16 to commend OEHHA for the impending publication  
17 of recommendations by the Risk Assessment  
18 Advisory Committee, and urge faithful adherence  
19 to those recommendations in all pending  
20 assessments.

21 "SB 1082 indicates the strong desire of  
22 the Legislature to resist, 'junk science' and  
23 to adhere to sound scientific principles in  
24 the development of regulatory policy. That,  
25 of course, requires a complete review of

1           available scientific literature; and, as  
2           the Risk Assessment Advisory Committee  
3           recommended, adequate evaluation of the  
4           variability and uncertainty of the data  
5           underlying any assessment.

6           "I know OEHHA has limited resources  
7           and that meeting the mandate of sound  
8           science is exacting and time consuming.  
9           But it is imperative not to fall back  
10          to incomplete or unbalanced assessments  
11          which tend to promote special interest  
12          agendas rather than sound public policy.

13          "Sincerely."

14   And it's signed "Charles M. Calderon."

15          CHAIRMAN PITTS: Thank you.

16          DR. GLANTZ: Could I just ask one other question  
17   as my role as an unpleasant person.

18          (Laughter.)

19          DR. GLANTZ: I read in Nature and Science about  
20   document shredding, which is, I'm sure, your favorite topic.  
21   That really is very troubling. Again, if we're interested  
22   in having an open process -- I mean, I just never heard of  
23   that before in this context.

24          And I was wondering if you wanted to clarify  
25   anything for the record of the Panel?

1 DR. BECKER: I would love to clarify for the  
2 Panel; however, the staff counsel has advised me that on  
3 this issue in terms of particular questions -- because of  
4 pending litigation, that I should not provide any comment at  
5 this time.

6 He's not here, so I'll say something.

7 (Laughter.)

8 DR. BECKER: Let it be very, very clear. We have  
9 rescinded that policy. I have rescinded that policy as  
10 Director. We have -- that policy is history.

11 Beyond that -- I've probably said too much  
12 already. I have staff counsel.

13 DR. GLANTZ: That's okay.

14 DR. BECKER: I will say one other thing. Once the  
15 pending litigation issues are resolved, I can honestly say I  
16 look forward to talking with you and everyone else about  
17 this issue.

18 DR. GLANTZ: Well, just to follow up on that,  
19 would it be fair to say that the policy of openness now  
20 means that, if we request information or things like that  
21 from your staff, they will provide it as a general  
22 principle, which again is the way it used to work.

23 DR. BECKER: Well, this is not dealing with that  
24 principle at all. The general principle of enhancing peer  
25 involvement is an underlying -- I'm sorry -- it is a major



1 goal of our organization. So, we will continue to work  
2 carefully and closely with our peers, so we get the best  
3 quality scientific product that there is.

4 And that does mean interacting very closely. I  
5 can't again -- I wouldn't say staff counsel has beat me over  
6 the head, but pretty close to that, in limiting my comments  
7 on the other area.

8 DR. FROINES: I think that the important thing --  
9 it seems to me that you've spoken very well at this meeting  
10 today, at least I feel that way. And I think that what we  
11 want to avoid is distrust. And when you have the policy  
12 that we aren't able to get documents until they've been  
13 reviewed at the top, and a two-year lapse from this  
14 committee meeting, without trying to characterize anybody's  
15 motive, it does create potential or an appearance that can  
16 lead to mistrust and concern. I think Stan is saying that.

17 And I think that what we want to do is to go  
18 forward and work together to resolve these issues. But I  
19 think you have a problem and you have to overcome that.  
20 Because there is tension in this room, and there has been  
21 tension in this room. We all knew there was going to be  
22 tension in this room, because we all know when we met last.

23 We all read the newspapers. We read the Nature  
24 article. And we heard Bill today say something quite  
25 directly, which actually adds to the concern.

1           So, I think that we have to, you know, put a  
2   needle in the balloon and let it kind of let the air out,  
3   and let everything cool down. And I think what we need is  
4   some real commitment to openness between this committee and  
5   OEHHA.

6           And I think if that's the guiding principle, we  
7   can go forward and work very effectively together.

8           DR. GLANTZ: And you know -- just to add, I  
9   absolutely agree with that. And I think that the one reason  
10  that we have produced -- by "we," I mean "everyone" -- have  
11  produced such a high-quality products from the scientific  
12  point of view, is that the process has been open.  
13  Information has freely flown back and forth -- or flowed  
14  back and forth between OEHHA, and ARB, and the members of  
15  this Committee, and the public through the public comment  
16  process.

17          And, you know, I sense a real effort to change  
18  that. And I think that, on the one hand, you're out here  
19  saying we want the best science, we want peer review. We  
20  want to bring everything up to speed as much as possible.  
21  But yet, I see on a day-to-day basis, things which are  
22  pushing in the opposite direction.

23          And I mean, there were times -- and this is true  
24  for every member of the committee -- when I've met with  
25  staff from OEHHA and ARB, and occasionally DPR, where

1 they've come to me for help in how to develop the reports,  
2 you know, and how should something be modeled, or how should  
3 the statistics be handled, or something like that.

4 And, you know, it's not something where they said,  
5 "We've got to get a draft and get it up for management  
6 review before we come talk to you."

7 It's been a very different kind of relationship  
8 than you're talking about. And I think that the changes  
9 that you're trying to make here are antithetical to your  
10 stated goals of making the science as good as possible.

11 DR. BECKER: I want to make sure that's clear.  
12 Our goal is to make the science as good as possible. We  
13 recognize the need for enhancing our interaction with our  
14 peers, and we hear your observations, your recommendations  
15 very loudly and clearly, Dr. Glantz, and from the other  
16 members. I appreciate that.

17 CHAIRMAN PITTS: Jim?

18 DR. SIEBER: One last comment. We worked with  
19 Rick very closely over the last 12, 14 months through this  
20 Risk Assessment Committee process. And I'll have to say  
21 that I was very impressed with his inputs and his knowledge  
22 of the large body of knowledge that we have to deal with.

23 And I'd like to say that, as a member of this  
24 committee, to Rick that we do look forward to working with  
25 you. And actually, I'm happy to see you in your position.

1 So, we're looking forward to it.

2 DR. BECKER: Thank you. I've been here since  
3 September 3rd; we didn't hear that.

4 (Laughter.)

5 DR. BECKER: Obviously, I face many challenges.  
6 And I do look forward to working with peers on this  
7 committee and peers on the other committees, and also other  
8 expert scientists throughout the nation and the world as we  
9 tackle these very difficult issues, as move forward and have  
10 the best science, to ensure again that the best science is  
11 brought to bear on the problems facing California.

12 DR. FROINES: I'd like to know what else is out  
13 there. We have lead, diesel, and ETS. What else is out  
14 there?

15 CHAIRMAN PITTS: I have even a more humane  
16 suggestion, and that's that we take a 15-minute break and  
17 return here -- a ten-minute break and return here at 11:30.  
18 How's that?

19 And then we'll address that issue.

20 (Thereupon, a recess was taken.)

21 CHAIRMAN PITTS: We will reconvene, please.

22 Dr. Froines, you were, at the time we adjourned  
23 briefly, you had some questions and some -- you have  
24 questions regarding the timetables. And Dr. Becker is here  
25 and remains. And we appreciate if you will come up and

1 discuss the questions that you have in mind to consider.

2 Dr. Becker?

3 DR. BECKER: I will defer to the Air Resources  
4 Board, because I'm not up to date on that.

5 DR. FROINES: My question was very simple, which  
6 is where are we?

7 DR. BECKER: Okay. I will have to defer to them.

8 MS. SHIROMA: Good morning, gentlemen. How are  
9 you?

10 All right. The question is, what's in the  
11 pipeline and when you can anticipate seeing them in the  
12 future. First of all, if this Panel feels that our lead  
13 report is approvable, then we will take the report to our  
14 Board in March, the March Board hearing for identification  
15 of inorganic lead.

16 We also have a report in progress on the  
17 identification of diesel exhaust. We anticipate -- we and  
18 OEHHA anticipate releasing another draft of that document  
19 the March, 1997 time frame for another comment period and a  
20 public workshop.

21 I believe that we are on your December 16th  
22 schedule to provide you with an update on that work.

23 We also have a petition that OEHHA is reviewing on  
24 nickel. A petition was sent in on nickel as a toxic air  
25 contaminant.

1           And then, OEHHA has --

2           DR. FROINES: Is that for a revisit?

3           MS. SHIROMA: A revisit of the health value.

4           And the SRP has a full process, which we are  
5 utilizing, for dealing with a petition. And the first step  
6 is that OEHHA reviews the scientific information.

7           Then, OEHHA has a number of reports in progress  
8 pertaining to the SB 1731 legislation attached to the hot  
9 spots program, working on health values and risk assessment  
10 information for the toxic air contaminants and hazardous air  
11 pollutants. And perhaps, Dr. Vance, if you want to fill us  
12 in on that?

13           DR. VANCE: Well, I'd be happy to. What we have  
14 is an acute -- a document describing acute reference  
15 exposure levels, which has already been out for public  
16 review and comment and a workshop.

17           We have in the pipeline, I believe, a chronic  
18 reference exposure level document, and we are currently  
19 working right now very hard on a technical support document  
20 for exposure assessment and stochastic analysis.

21           We hope to be able to release that just before  
22 Thanksgiving for public review and comment. We'll also be  
23 having a workshop on that document.

24           DR. GLANTZ: When will there be internal review  
25 drafts for the diesel document that would be available to

1 the SRP to take an informal look at it?

2 DR. VANCE: Well, I don't have them in my office  
3 yet, Dr. Glantz, so I can't give a direct answer to that  
4 question right now.

5 DR. GLANTZ: Where is the Part A? What's the  
6 status of the Part A?

7 MS. SHIROMA: Well, I can give you a short update  
8 right now. We are working on the Part A now to update the  
9 ambient concentration estimate and also a near-source  
10 estimate, and also looking at the indoor/outdoor  
11 environment.

12 So, we're in the process now of folding in this  
13 latest information on these aspects.

14 DR. FROINES: The acute and chronic documents, are  
15 they -- do they include chemicals for which risk assessments  
16 are being done, or are they procedures, or what are we  
17 talking about?

18 DR. VANCE: George, would you like to respond to  
19 that? Then you can get a correct answer.

20 DR. ALEXEEFF: George Alexeeff with OEHHA.  
21 Actually, there are four major documents in preparation.  
22 One is the acute exposure level documents. That has  
23 actually gone out for public comment. And also, both Dr.  
24 Sieber and Dr. Glantz have interacted with that document.  
25 That one has had public comment, and we're revising it at

1 this point.

2 The chronic reference exposure level document is  
3 utilizing or looking -- we've reviewed the reference  
4 exposure levels that U.S. EPA's used, and you know, and  
5 adopting or proposing to adopt those that we think reflect  
6 the best science, and then adding additional chemicals that  
7 are HAPS. We're proposing to add additional chemicals using  
8 the same procedures.

9 And that document will -- you know, we're still in  
10 the process of preparing it internally, but below my level.  
11 And then the cancer --

12 DR. FROINES: Wait a minute, George, before you go  
13 on. That document will come to this committee for review?

14 DR. ALEXEEFF: Yes. The law requires it to come  
15 for review. And I think that when we first -- when  
16 Genevieve and I first presented to the panel the information  
17 that there were two laws passed -- AB 2728 and SB 1731 -- we  
18 appointed some Panel members -- at that time, we didn't  
19 quite envision how the process was going to work in the  
20 sense of how many documents there will be in that. And it  
21 may be some value in making sure we have enough Panel  
22 members to cover each document.

23 I think we appointed two people for 2728 and two  
24 people for 1731. And we haven't really divided it along  
25 regulatory lines. We've just provided along health and



1 exposure end points.

2 So, it might be good just to clarify who the leads  
3 are.

4 DR. FROINES: In the chronic reference exposure  
5 levels, how many chemicals are you talking about?

6 DR. ALEXEEFF: Over a hundred. And for the acute  
7 document, there was over 50.

8 And then, there's a third document on cancer  
9 potency factors, which doesn't derive any new values, but it  
10 simply sort of documents where all the existing values come  
11 from, particularly the U.S. EPA values.

12 DR. FROINES: I'd like to see a process happen  
13 where we took these three documents and somehow broke it  
14 down so that this committee, with say meeting every three  
15 months, and taking a part of one of those, and then meeting  
16 three months later, and taking a part of another one, and in  
17 a sense kind of make sure the process was facilitated, so  
18 that we don't get these long gaps where everybody forgets  
19 what happened two years ago.

20 So, if there's a way to structure this process, I  
21 think that would be helpful.

22 DR. ALEXEEFF: Well, as I think Dr. Vance pointed  
23 out, our next release is our stochastic modeling document.  
24 And so, all of our effort is focused on preparing and  
25 finalizing that document.

1           And the other ones are following behind as quickly  
2 as they can follow, finishing up the internal peer review  
3 and that sort of thing.

4           So, I don't think we're planning on breaking it  
5 down to smaller parts right now. But I do think that it's  
6 not clear, probably from my perspective, SRP leads that  
7 would be appropriate for each part. We actually have two  
8 leads on the acute document clearly established. And the  
9 other documents, it might make sense to go to two leads, you  
10 know, however we do the leads on the other ones, just so  
11 that one person or two people aren't bogged down with each  
12 document.

13           Each document will be fairly extensive, hundreds  
14 of pages with that many chemicals.

15           DR. GLANTZ: Are there any compounds in the  
16 pipeline for AB 1807, any new compounds, other than the ones  
17 we have talked about?

18           MS. SHIROMA: At this point, there are not,  
19 because the -- that first piece of legislation, 2728, took  
20 us through a process to identify all of the 189 Federal  
21 hazardous air pollutants as toxic air contaminants. And so,  
22 then, those folded into this 1731 process that George is  
23 referring to.

24           And so, that has been all of our focuses at this  
25 point, plus wrapping inorganic lead and diesel exhaust.

1 DR. GLANTZ: Would it -- I don't want to take too  
2 much time, because we've still got to do lead, and I don't  
3 want to leave here until it's done, because I don't want to  
4 wait another three years.

5 Would it be appropriate at our next meeting maybe  
6 to have as an agenda item a more formal review of all of  
7 this stuff, and maybe -- you don't need to redo it, but  
8 maybe bring -- you guys had done a priorities document for  
9 1807 a few years ago, and maybe bring that back, and maybe  
10 look at what your overall plans are for all of this stuff in  
11 some context where we've had a chance the documents before  
12 the meeting and think about it.

13 Because, as you know, we have from time to time  
14 expressed views about priorities and stuff. And maybe we  
15 can do that at the December meeting with a little staff  
16 preparation.

17 I mean, is that reasonable or would that make a  
18 whole lot of extra work for you that wouldn't benefit much?

19 MS. SHIROMA: No, we'd be happy to do that.

20 I also neglected to highlight that we -- Joan's  
21 staff put together the compound summary report, the  
22 reference document that contains information on the various  
23 characteristics and aspects of these compounds, which help  
24 setting priorities and supplying information to the public.

25 DR. FROINES: Was that 244 substances?

1 MS. SHIROMA: Yes. Yes, that's correct.

2 DR. FROINES: If those deal with the exposure  
3 assessment, I want to look at those, because the amount of  
4 exposure information in those documents is vanishingly  
5 small, and it shows you something about the state of the  
6 monitoring that's going on these chemicals. There are 244  
7 chemicals, and it's very striking, the lack of data.

8 I still always worry about this, because I still  
9 think that we do these lead and methylene chloride,  
10 perchloroethylene, and acetaldehyde, but we still at some  
11 levels don't know what the problem of air toxics is. We  
12 still don't have an overview of what we are dealing with in  
13 some ways, at least in my mind.

14 So, for example, we're dealing with diesel, but we  
15 know that in Southern California we produce an awful lot of  
16 nitro PAHs and the atmospheric chemistry between PAHs and  
17 nitrogen oxides. And so, in Southern California, we have  
18 nitro PAHs produced by atmospheric chemistry and we have  
19 diesel exhaust, and it would be interesting to me to know  
20 what is the scope or the mention of that particular problem,  
21 because a lot of those compounds are very potent  
22 carcinogens.

23 And so, what is the scope of that problem? We  
24 keep doing individual chemicals, but we somehow have a  
25 forest/trees problem I think. It would be worth -- just

1 that one alone would be interesting to try and think about.

2 DR. SIEBER: Let me add one other aspect. There's  
3 a lot of interest in particulate matter, and the small  
4 fraction of particulate matter, PM2.5, in changing  
5 regulations now. Whether or not that's part of 1807 is  
6 almost beside the point, because chemicals don't respect  
7 those distinctions.

8 There will be lots of air contaminants associated  
9 with particulate matter in different size categories. It's  
10 kind of related to both the lead and the diesel issues, and  
11 probably lots of others.

12 So, where is particulate matter in the new  
13 knowledge that's being generated now on particulate matter?  
14 How's that factor into what we're going to do the next year  
15 or two? You don't want to keep aside as a separate issue.

16 DR. FROINES: There's some extraordinarily  
17 interesting new toxicologic data on particulates that the  
18 people at Harvard are doing that shows particles having  
19 strong effects on animal models. It's very interesting  
20 stuff.

21 CHAIRMAN PITTS: Are there any other questions.  
22 Are we agreed then on what we will be discussing on this  
23 topic in December? Maybe we could clarify that. If not  
24 now, let's get together and decide how you want to present  
25 this in December.

1           Stan used the term, "and all that stuff." So,  
2 let's clarify some of that stuff. We can do it informally  
3 subsequently, but what is your view, what is your feeling  
4 now as to what you would like to present and we'd like to  
5 hear?

6           MS. SHIROMA: What I understand is that you would  
7 like an update at the December 16th meeting on our work in  
8 progress on this program, the AB 1807 program and the  
9 related 1731 program, the various products, some delineation  
10 as to who the lead members of the SRP are or will be for  
11 those various products; also a discussion of or a reminder  
12 discussion of the way we prioritize substances. We have a  
13 prioritization scheme.

14           Also some discussion of the context of all the  
15 work in the overall scope of the program for the toxics  
16 program. And perhaps we don't have all the answers on  
17 particulate matter, but perhaps some discussion on where  
18 we're heading with that.

19           DR. GLANTZ: The other thing that I'd like to do  
20 is to look at the old priority document that you guys had  
21 prepared, and to also get some sense of what's in the  
22 pipeline, not just what you're working today, but what --  
23 you know, because this is a very long process -- what you  
24 envision coming into the pipeline over the next few months,  
25 what you anticipate starting to work on.

1           CHAIRMAN PITTS: Did you have in your request your  
2 question about bringing up diesel? You wanted some comments  
3 on the status of where we are?

4           DR. FROINES: Let's get John Holmes for all I  
5 know, but at some point, I'd like to know when we look at  
6 the South Coast Basin, what do we think is going on with  
7 nitro PAHs?

8           CHAIRMAN PITTS: Well, we can discuss that if  
9 you'd like.

10          DR. FROINES: And it's also a research issue,  
11 because Janet and Roger are working on it. But it seems to  
12 me that the question is, you know, what is the collective  
13 impact, and maybe nitro PAHs is one way to look at a little  
14 piece of that.

15          But I'm not proposing anything. It's just  
16 frustration.

17          CHAIRMAN PITTS: Is there some comment as to where  
18 we stand on the diesel report, specifically on diesel? The  
19 status of where we are on the, for example, the exposure --  
20 Will we see that? Will that be discussed?

21          MS. SHIROMA: Yes. On December 16th, we will  
22 provide you with an update --

23          CHAIRMAN PITTS: Good.

24          MS. SHIROMA: -- OEHHA and ARB.

25          CHAIRMAN PITTS: Excellent. That will be right on

1 the agenda then.

2 MS. SHIROMA: Yes.

3 CHAIRMAN PITTS: And we will have the DPR report  
4 that's been deferred today.

5 DR. ALEXEEFF: It will just be a status update.  
6 It's not a discussion of a document.

7 CHAIRMAN PITTS: And any questions arising.

8 And in terms of diesel exhaust, you have  
9 tremendous amounts of compounds emitted, simple polycyclates  
10 and naphthalene, and these are emitted. They react very  
11 rapidly in the atmosphere and they form 1-nitronaphthalene.  
12 2-nitronaphthalene. They form nitrope -- nitrones, which  
13 have among the highest mutagenicities of any organic ever  
14 tested. And these are right there, and they're measured.  
15 They're in the atmosphere. You're breathing them. And  
16 they're in respirable particles. In fact, they're particles  
17 less than one micron.

18 And so, they're there. And so the question is,  
19 how do these atmospheric transformations -- how are they  
20 involved and how do they fit into a sound risk assessment?

21 And so, that's the --

22 DR. FROINES: The issue is that we have a lot of  
23 nitro PAHs in diesel and other PAHs, and then we have the  
24 atmospheric chemistry going on.

25 And so, it seems to me we ought to look at that as



1 a common problem and say we've done a risk assessment on  
2 this common problem, and here's what the public just is  
3 affected by.

4 I mean, it goes to what is the danger of the real  
5 problem in Southern California, for example. And I kind of  
6 would like to say one thing that will make everybody  
7 nervous. I think at some point we should get an update on  
8 what's happening with MTBE, because MTBE is quite a major  
9 potential problem as you know.

10 All of Santa Monica's drinking water wells are now  
11 closed because of contamination. And it's in the air. And  
12 we are still waiting to see if Maltoni's lymphomas and  
13 leukemias can be confirmed. And if they are confirmed, then  
14 we have a major issue in California because of the  
15 widespread use of MTBE.

16 And so, the U.S. Geological Survey is very nervous  
17 about it, because not only does it get into groundwater from  
18 leaking tanks, but it's very soluble in soil. So, it just  
19 penetrates like a shot. So, there are a lot of major issues  
20 on MTBE. And we ought to have a discussion about it.

21 CHAIRMAN PITTS: Would you like to have that on  
22 the agenda for, say, December, also?

23 How about the one after this? We have a pretty  
24 full platter in December. But that brings up something else  
25 right now. It was mentioned by Dr. Froines and by Dr.

1 Glantz. We might really want to think, as we address these  
2 issues, that we sort of set up a formal every-three-month  
3 period, a meeting every three months. I can assure you if  
4 there's nothing on the platter, we won't need it. I'm not  
5 in favor of meetings that have no agendas.

6 But when we have agendas and new information,  
7 perhaps we can discuss this later. You know, this is not  
8 the time to discuss it, but let's get a sense of the Panel  
9 that this might be very useful to all concerned.

10 Yes, Jim?

11 DR. SIEBER: I think it's very timely, because  
12 when California ushered in the 189 HAPS, that changed kind  
13 of the way we do our business, because most of these  
14 compounds are on the HAPS list. I'm not sure whether MTBE  
15 is, but it ought to be.

16 Now what do we do? Do we just wait for EPA to act  
17 on these 189 or do we see a problem and go out after it?  
18 I'm certainly in favor of that.

19 DR. GLANTZ: I move that we start lead, because if  
20 we don't start, we won't finish.

21 CHAIRMAN PITTS: Get the lead out, right?

22 DR. GLANTZ: Yeah.

23 CHAIRMAN PITTS: Okay. All right. As a matter of  
24 fact, we will now move to -- let's see, is this only Item 2?

25 (Laughter.)

1           CHAIRMAN PITTS: The review of the proposed  
2     identification of inorganic lead as a toxic air contaminant.

3           MS. SHIROMA: Thank you. I'm going to introduce  
4     this item with pleasure.

5           We've got a good report before you today. Again,  
6     you know my name is Genevieve Shiroma. I'm the Chief of the  
7     Air Quality Measures Branch at the Air Resources Board.  
8     It's my staff that's been working on the exposure portion of  
9     this assessment, the Part A.

10          You know Dr. Joan Denton to my right. And to my  
11     left, this is Jeff Wright, who is the staff person  
12     responsible for seeing the report through fruition.

13          Now, where we last left off with the Panel, you  
14     had approved the entire report, except for the REL, the  
15     reference exposure level, discussion in the Executive  
16     Summary and the Part B. And your instruction to us and  
17     OEHHA was to reevaluate this portion of the discussion and  
18     send the material back out for public comment.

19          Now, Dr. Bart Ostro from the OEHHA will be  
20     summarizing that effort. Now, in the meantime, during the  
21     ensuing time, we did take another look at the Part A and  
22     have updated certain portions of Part A exposure assessment  
23     to reflect the most current information.

24          So, Jeff Wright will be walking you through the  
25     public process that we've used, and the proposed changes we

1 have made to the Executive Summary and Part A on the  
2 exposure discussion.

3 And then, we'll also provide a summary of the  
4 comments we received on the Part A and then our responses to  
5 those comments.

6 It's a very short presentation.

7 MR. WRIGHT: Thank you, Genevieve.

8 Good morning, Dr. Pitts and the other members of  
9 the Scientific Review Panel. As a reminder, inorganic lead  
10 entered the identification process back in February of 1991.  
11 Without discussing each box in the overhead in detail, I'd  
12 just like to point out that the document has gone through  
13 six different public comment periods, the last of which  
14 ended last week; three separate workshops, the last of which  
15 was held during March of this year.

16 It was attended by Dr. Pitts, and is now before  
17 the panel for the third time. If the Panel approves the  
18 report, the staff plans to release the report again in  
19 February of 1997 for a 45-day public comment period, and  
20 bring it before the Air Resources Board at a public hearing  
21 during March of 1997.

22 Now I'd like to talk about the exposure assessment  
23 and changes to the document starting with --

24 DR. GLANTZ: (Interjecting) If we approve the  
25 report today, why does it take until February to release the

1     thing for public comment?

2             MS. SHIROMA:   Okay.   If you approve the report and  
3     finalize your findings, it is the logistics of taking this  
4     report, Part A and Part B, folding it into a staff report  
5     that then goes on to the Office of Administrative Law for  
6     final --

7             DR. GLANTZ:   Okay, okay.   Never mind.

8             (Thereupon, both parties spoke simultaneously.)

9             DR. GLANTZ:   I give up.   Never mind.

10            MS. SHIROMA:   We've minimized our --

11            DR. GLANTZ:   I give up.

12            MS. SHIROMA:   Okay.

13            DR. GLANTZ:   I give up.   You won hands down.

14            MR. WRIGHT:   Okay.   Changes to the Executive  
15     Summary:   Besides minor grammatical and technical  
16     clarifications, the changes in the Executive Summary reflect  
17     two main points: one, changes in the emission estimates,  
18     which I'll describe shortly; and, two, information from Part  
19     A clarifying the near-source monitoring is now included in  
20     the Executive Summary.

21            Also, please note that acetaldehyde and BaP were  
22     inadvertently left out of Table 1 on page 17 of the  
23     Executive Summary.   These will be added in the final  
24     version.

25            The most significant revision to Part A is to the

1 emission inventory. This overhead is Table III-1 in Part A.  
2 As a result of updating our emission inventory, six further  
3 defined source categories have been added to the table and  
4 they're denoted by italics.

5 The largest change in the emission estimates is  
6 the contribution that stationary point sources have to the  
7 total estimate.

8 Stationary point sources went from contributing  
9 approximately 160 to 280 tons per year, as estimated in our  
10 August, 1993 version of the report, to about 26 tons per  
11 year out of a total California estimate of 175 to 182 tons  
12 per year. This total estimate is approximately a 45 percent  
13 reduction of the total estimate in our previous version of  
14 the report.

15 Now, I'd like to summarize the comments --

16 CHAIRMAN PITTS: Could I just --

17 MR. WRIGHT: Sure.

18 CHAIRMAN PITTS: Let me just interrupt for a  
19 second. This is relevant to the comments I made earlier on.  
20 As you point out in Part A, not to put too fine a point on  
21 it, which is relevant to the way we have an indicator on the  
22 board, in the context with a pencil indicator -- just a  
23 little modest humor. All right.

24 That number, and these are the numbers we quoted  
25 earlier, that the California estimate is 172 to 182, of

1     which the mobile aircraft -- this surprised me -- is 149.

2     That's a lot.

3             Then, when you come down to the EPA's number that  
4     was prepared by TRI, you wind up with a total of 8 instead  
5     of 182. And, of course, they have left out mobile sources.  
6     And hopefully, the aircraft are indeed mobile, especially  
7     when you fly on them.

8             Okay. But that's just an illustration of the  
9     point I was trying to make here that it's very important  
10    that the categories -- well, I guess back to your emission  
11    inventory sources, this group you've put together, what are  
12    the emissions? What's involved with the total? I didn't  
13    mean to interrupt, but it's an example there.

14            DR. FROINES: Brass foundries are included under  
15    foundries and steel mills?

16            MR. WRIGHT: Yes, that's correct.

17            DR. FROINES: And secondly, why is it that only  
18    grid casting and lead oxide reduction? Because, when you're  
19    in a battery plant, which I've been in -- unfortunately more  
20    than I would ever like to be -- there are a lot of sources  
21    of lead besides grid casting and lead oxide production.

22            MR. WRIGHT: As I understand, that's just all the  
23    information that we have as far as emissions. So, there  
24    could be other emissions. We just don't have data for that.

25            DR. FROINES: Because those are processes. Grid

1 casting is supposed to be a process, and so is lead oxide  
2 production. And you would think that you would -- it would  
3 be like a process of 10 parts, say, that you have  
4 information on two of the parts? It seems like you'd have  
5 information on all of the parts.

6 But it's not a major deal. I don't want to slow  
7 us up. It's just interesting.

8 MR. WRIGHT: Now, I'll summarize the comments  
9 received during this last comment period on the exposure  
10 assessment. Dr. Bart Ostro will summarize the health  
11 assessment comments during his presentation.

12 We received one comment from the Natural Resources  
13 Defense Council. Their comment is, they would like more  
14 information about the degree of protection that OEHHA  
15 envisions, and that it be included in this document.

16 The staff response is that OEHHA's provided a  
17 scientific assessment based on the existing information, but  
18 the degree of protection for these children will be a risk  
19 management issue.

20 And we have received five comments from the Lead  
21 Industry Association.

22 Comment 1: The estimate of 2500 individuals  
23 exposed to a near source concentration of .20 micrograms per  
24 cubic meter has no basis.

25 The staff response is: The analysis LIA is



1 referring to comes from our near source analysis in Part A.  
2 Table IV-4, page 60 of Part A, shows that 2,000 individuals  
3 in the near source estimate were used instead of 2500.

4 Next, the table shows that approximately 2,000  
5 individuals could potentially be exposed to a minimum of .03  
6 micrograms per cubic meter and a maximum of .2 micrograms  
7 per cubic meter.

8 For the purposes of the near source analysis, we  
9 used the upper end of the range. We note that Tables IV-5  
10 and IV-6 show that concentrations at this level are not  
11 unreasonable.

12 Comment 2: LIA objects to the characterization in  
13 Part A that near source monitoring results conducted near  
14 the two secondary lead recycling facilities in Southern  
15 California showed significant concentrations near the  
16 facilities without qualification as to the meaning of the  
17 term "significant," and they want the 52 value removed from  
18 the document.

19 The staff response: These monitoring results are  
20 viewed as significant, because they were 52 times higher  
21 than the surrounding ambient concentrations, and were over  
22 our ambient air quality standard. We believe the example is  
23 informative; it could occur, but have placed this example in  
24 context as far as its occurrence and possible causes.

25 The third comment: LIA believes that relying on

1 emissions data from 6 to 7 years before the implementation  
2 of the South Coast Air Quality Management District Rule 1420  
3 is inappropriate.

4 As I presented before, we have updated the  
5 emissions inventory to include Rule 1420 data. During the  
6 risk management phase, we will do a thorough evaluation of  
7 source contributions to the ambient air.

8 MS. SHIROMA: And by the way, the response to Dr.  
9 Froines' about the battery operations, there again, in the  
10 risk management phase, we can work on providing a more  
11 comprehensive updated inventory.

12 MR. WRIGHT: The fourth comment: LIA objects to  
13 the characterization that stationary area sources release  
14 small quantities of pollutants from many closely located  
15 sites over a relatively large geographic area, and find this  
16 to be confusing and unfounded.

17 We agree that this sentence is confusing, and it  
18 will be removed, as it is not pertinent to the discussion.

19 CHAIRMAN PITTS: Where's that?

20 MS. SHIROMA: Page 25, in the first paragraph  
21 under 3, Stationary Area Sources.

22 CHAIRMAN PITTS: Page 25, what line?

23 MS. SHIROMA: Page 25, it's the first paragraph,  
24 first sentence.

25 CHAIRMAN PITTS: Why are you excluding that

1 statement? Is that statement wrong, or is that statement  
2 incorrect about the statement?

3 MS. SHIROMA: Well, in looking at the whole  
4 paragraph, I think the commenter felt that we were trying to  
5 apply this sentence to the current situation with potential  
6 lead sources. In looking at the whole paragraph, we thought  
7 that the discussion in the rest of the paragraph is clear  
8 and, if that first sentence is confusing, it does not take  
9 away from the paragraph by removing the sentence.

10 CHAIRMAN PITTS: Why can't you be specific and say  
11 specifically, "Stationary area sources of lead release  
12 quantities of pollutants," if you want to say small, or  
13 "significant quantities of pollutants. You have numbers  
14 that make them significant, .24 micrograms per cubic meter,  
15 .36 of a mile away from the source, over a relative large  
16 area -- you might want to define what that is. "Relatively  
17 large" is the term that could be quantified somewhat more  
18 specifically.

19 It seems to me that's an important point. As a  
20 matter of fact, the most important impacts of lead are --  
21 aren't they rather stationary area sources with --

22 MS. SHIROMA: I think this is the terminology.  
23 The stationary point sources are such things as -- whether  
24 it's cement manufacturing, or smelting, or battery  
25 manufacturing, or what have you.

1           The stationary area sources are --

2           CHAIRMAN PITTS: (Interjecting) Oh, I'm sorry.

3   You're talking about --

4           MS. SHIROMA: -- such things as landfills, public  
5   lands, and so forth.

6           CHAIRMAN PITTS: Great. How about if you define  
7   stationary area sources such as, "such as. . ."

8           "Such as," and then you clarify the statement.

9           MS. SHIROMA: Yes, we can do that.

10          CHAIRMAN PITTS: No one should object to that.  
11   That's just defining what you're --

12          MS. SHIROMA: Rather than delete the sentence,  
13   we'll rework the sentence.

14          CHAIRMAN PITTS: Yeah. Just clarify that so even  
15   I can understand it.

16          MS. SHIROMA: Will do.

17          MR. WRIGHT: Comment 5: LIA states that the  
18   report fails to reconcile the revised emission estimates  
19   with the prioritization criteria found in the California  
20   Health and Safety code. If reconciled, lead would rank as a  
21   low priority for evaluation.

22          The staff response: Prioritization occurs before  
23   substances are entered into the process, and we believe it  
24   is appropriate to continue the process. However, even  
25   though the emission estimate has been revised and is lower,

1 it does not result in raking lead as a low priority, because  
2 emissions are only one of five factors considered in  
3 prioritization.

4 And that concludes my presentation. We'd be happy  
5 to answer any other questions you may have.

6 DR. WITSCHI: Yeah. I have a question. But this  
7 decrease from the last time, you know, from about 750 to 470  
8 tons to 180 tons, is this real or is this the calculation?

9 MS. SHIROMA: It is real, in that Rule 1420 in the  
10 South Coast came to fruition, began to be implemented, and  
11 the requirements in the rule are several fold -- whether  
12 it's ambient monitoring or inventorying of the emissions,  
13 and Jeff or Joan can elaborate on that.

14 So, Jackie Johnson, who is on maternity leave, on  
15 this project, went down to the South Coast with staff, went  
16 through all of the records and plans of the various specific  
17 company files to update this emissions inventory. And Joan  
18 has more data on that.

19 DR. DENTON: This is Joan Denton with the Air  
20 Board. Besides the Rule 1420, we also used updated data  
21 from our 2588 database. And we did not have this  
22 information available before in our earlier emission  
23 inventory. So, we also used data from that eight-tenths  
24 (phonetic) database to update the emission inventory. And  
25 that's the hot spots inventory from the 2588 hot spots data.

1 DR. WITSCHI: So, this is real then.

2 DR. DENTON: This is real data.

3 DR. WITSCHI: Yes, but I also mean this means that  
4 within the last three years, we've seen a substantial  
5 reduction of lead being put into the environment. That's  
6 correct?

7 MS. SHIROMA: I think it's a combination of  
8 seeing, yeah, the good news being there has been a reduction  
9 in lead emissions. Also, we acknowledge that our state of  
10 knowledge in the first draft report was based to some degree  
11 on extrapolation and estimation.

12 So, we're not certain how much of that original  
13 estimate was actually emitted. But basically, we do know  
14 that there has been a reduction in emissions.

15 DR. WITSCHI: Any other questions?

16 DR. FROINES: I think the data is important,  
17 because as you look at lead from a pollution prevention  
18 standpoint, instead of strictly as a control strategy, you  
19 really want to know where the lead is found, because then  
20 you can figure out some way to do something about it.

21 So, it seems to me that we need at this point  
22 history to start thinking about pollution prevention as we  
23 go forward with these documents.

24 DR. WITSCHI: Any other comments on Part A?

25 MS. SHIROMA: Then next, is Dr. Bart Ostro, who

1 will provide a presentation on the Part B. And if there are  
2 other questions on Part A that you think of along the way,  
3 we'd be glad to come back.

4 CHAIRMAN PITTS: It seemed very comprehensive and  
5 it's a first-class job for an exposure assessment of lead.  
6 I think this is sort of a model again, which the EPA might  
7 test its current procedures in establishing emission  
8 inventories and exposures to the public in 49 other States.

9 MS. SHIROMA: Thank you.

10 DR. WITSCHI: Do you have any comments on the  
11 exposure assessment of the lead?

12 DR. GLANTZ: No. But I'll make up for it on Part  
13 B.

14 DR. FROINES: And the world breathes a sigh of  
15 relief.

16 (Laughter.)

17 DR. WITSCHI: Okay. I think now we go to the  
18 health effects part. It might be well to remember at this  
19 time that it was lead who broke down the Roman Empire. So,  
20 it's a rather important topic.

21 Let me also say at the beginning that, when  
22 reading Part B, I was very favorably impressed by the  
23 thorough review that had been done by the staff, really  
24 keeping up in the literature, to the news that came out.  
25 So, I think you have to be commended for the good job you

1 have done. Okay.

2 DR. ALEXEEFF: Hello. I'm George Alexeeff with  
3 the Office of Environmental Health Hazard Assessment. And  
4 we'll be presenting our revisions to Part B and briefly  
5 discussing the comments that we've received and our  
6 responses to them.

7 What I asked Dr. Bart Ostro to do was to give a  
8 very brief presentation as to sort of where we left off in  
9 January of '94, and what has changed in the document and  
10 what are the key issues in the document.

11 So, we'll give that presentation and then you can  
12 ask additional questions to -- if you want more detail,  
13 because this is something that could take a long time, but  
14 I've asked him to give a brief overview.

15 DR. OSTRO: Okay. We have reviewed and evaluated  
16 the health effects of inorganic lead to determine whether  
17 lead should be classified as a toxic air contaminant.

18 In attempting to assess the risks of lead, we were  
19 very fortunate, in that there's a large amount of  
20 literature, literature both from the epidemiologic field,  
21 toxicology, clinical studies, and occupational studies to  
22 draw on.

23 Now, just to repeat what Genevieve has indicated,  
24 we last met in January of '94 to discuss the December, '93  
25 report. And the SRP recommended at that time that the



1 report be revised with respect to development of the  
2 reference exposure level, the REL.

3 Now, two points to begin with is that we've known  
4 for a long time that lead in the environment will ultimately  
5 be associated with lead in blood. And perhaps the best  
6 evidence indicating the association between blood lead and  
7 air lead was provided many years ago in this graph, which  
8 looked at the amount of lead in gasoline and the associated  
9 amount of blood lead in children over a four-year period.

10 So, there's two things to note from this. First,  
11 that the association is a very strong one, and apparently a  
12 fairly immediate one. But, second, that lead has decreased  
13 drastically over this four-year period. And if we could  
14 extend this graph for another 10, 15 years, this graph would  
15 nicely continue down. Both blood leads and air lead levels  
16 have dropped drastically since the mid-seventies.

17 So, in fact, as we indicate in our document, when  
18 we look at the blood lead data from the NHANES study that  
19 was conducted in 1976 to 1980 versus the NHANES data from  
20 1988 to '91, we see about an 80 percent decrease in blood  
21 lead in most of the population. We know that other changes  
22 have occurred. Lead in gasoline has now been eliminated.  
23 In some parts of California, we have seen about a 30-fold  
24 reduction in air lead since the mid-seventies, and that lead  
25 has been reduced from other sources of exposure as well.

1           And OEHHA does believe that the current ambient  
2   concentrations of .06 population-weighted, based on data  
3   from ARB, that air lead blood levels is a relatively minor  
4   contributor to overall lead exposure.

5           Now, let me go back and review the methodology  
6   that we used to evaluate the risks in this process. And the  
7   darker boxes are trying to indicate the revisions from the  
8   last version, just in case you don't remember. Basically,  
9   we looked at three different end points -- cancer,  
10   neurodevelopmental effects, and blood pressure effects.  
11   These are the effects that we believe are occurring at the  
12   lowest levels of lead exposure.

13           And basically, nothing has changed from the  
14   document that relates air lead to direct inhalation and  
15   cancer effects. The changes are all related to blood  
16   pressure and neurodevelopmental effects.

17           And we've done a number of changes since then  
18   based on the current scientific evidence. You recall that  
19   blood pressure effects and neurodevelopmental effects are  
20   related to blood lead in the literature, not related  
21   directly to air lead.

22           So, we need to have some kind of pathway that  
23   associates or some kind of model that associates air lead to  
24   blood lead.

25           In our last version of the document, we used what

1 we call the aggregate model, the multipathway aggregate  
2 model that looks at the direct effects of inhalation as well  
3 as the effects of lead emitted into the air that might end  
4 up in the soil or in household dust. So, we consider it a  
5 multipathway model.

6 We've maintained that model, and we've reviewed  
7 the literature and tried to update the studies, and narrowed  
8 the criteria that we would use in developing a slope that  
9 would relate air lead to blood lead.

10 Also, since that time -- so, we have this  
11 aggregate model predicting blood lead, which then relates to  
12 blood pressure and neurodevelopmental effects.

13 Since this time, we've also -- based on some  
14 comments that we received as well as an updating of the  
15 scientific information, we've also used EPA's IEUBK model,  
16 the integrated environmental uptake and biokinetic model,  
17 something like that. It's got some of those words in there.

18 (Laughter.)

19 DR. OSTRO: Integrated exposure uptake and  
20 biokinetic model.

21 And so, we've used that model also to relate air  
22 lead to blood lead as a way of both providing independent  
23 assessments of the association between air lead and blood  
24 lead, as well as to see how that performed relative to our  
25 slope estimates derived from the aggregate model.

1           Another change I think we've incorporated is the  
2 blood lead concentrations. Remember, last time, we had a  
3 big discussion about what were blood leads like in  
4 California. There wasn't very much information at that  
5 time. And, unfortunately, we still believe that, for  
6 California, per se, we do not have representative data.

7           So, what we have used is what we think is the most  
8 representative data for California, which is the NHANES 3  
9 data, which exists for the nation. This is a nationwide  
10 population-weighted data set with a good deal of quality  
11 control, duplicate sampling, and so on. And we believe that  
12 the results of the mean blood leads and the distribution of  
13 blood leads based on that NHANES 3 are fairly representative  
14 or likely to be fairly representative for California.

15           However, we quickly will add that it turns out  
16 that we could make other assumptions about geometric mean  
17 and geometric standard deviation, and they do not affect our  
18 overall quantitative conclusions.

19           Now, let me go through very briefly, as George  
20 said, what some of the changes in the report are. First, we  
21 did go back and look at the reference exposure level as the  
22 SRP asked to, and we eliminated the reference exposure  
23 level.

24           If you recall last time, we had assumed a level of  
25 about 4 micrograms per deciliter of the mean blood lead.

1 And then, we asked the question: How much air -- additional  
2 air exposure would we have to have to drive the mean from 4  
3 to 10, and we added some safety factors and provided an REL  
4 of about .75.

5 Since that time, we now have this NHANES 3 data,  
6 which now gives us a general picture of the overall  
7 distribution of blood lead. So, rather than provide a  
8 specific reference exposure level, we now indicate what the  
9 effects of this distribution of blood lead.

10 So, we'll get into more of that in a few minutes.

11 Second, regarding the blood lead/air lead  
12 relationship, as I've indicated, we've reviewed the studies.  
13 We've incorporated the latest studies, and a tighter  
14 criteria was applied for using the aggregate model.  
15 Basically, we wanted to make sure that we had blood lead  
16 levels in the two populations that we were going to be  
17 comparing and air lead levels of both populations that we  
18 could be comparing.

19 And then, from that, we could then determine how  
20 blood leads would change with air leads. There were several  
21 studies available that did not have information like the  
22 means or the air leads. And we felt that those would not be  
23 appropriate for determining a slope.

24 And we've also provided estimates, as I've  
25 indicated, using the IEUBK model, the U.S. EPA's model. And

1 this model starts with a whole different set of assumptions.  
2 It's basically a software model, a stand-alone software  
3 model, that can be used on the P.C. It accounts for  
4 specific intake and uptake, and distribution of lead in the  
5 body, and also specifically models biological interactions  
6 of absorption, distribution, storage, mobilization, and  
7 excretion. So, it's a nonlinear model with an entirely  
8 different set of assumptions than the aggregate model.

9 So, as I indicated, we looked at the relationship  
10 between blood lead and air lead using both of those models.

11 Regarding the neurodevelopment effects, first, we  
12 incorporated the latest information for NHANES 3 regarding  
13 the geometric mean and geometric standard deviation.

14 Second, we now provide estimates for the percent  
15 of the population that will be moving above 10 micrograms  
16 per deciliter, which is the CDC level of concern that we  
17 concur with as a level of concern.

18 So, we now provide estimates for the percent of  
19 the population -- mostly the percent of children that will  
20 move above 10 micrograms per deciliter at alternative air  
21 leads.

22 And we've also really not changed -- we did this  
23 in our last document. We looked at the direct effects of  
24 blood lead on I.Q. and present those estimates as well.

25 Regarding blood pressure, the effects of blood

1 lead on blood pressure and more serious cardiovascular  
2 outcomes, basically -- again, there's been a lot of  
3 literature since 1993, and we have added that literature.  
4 There have been several analyses that support the  
5 association between blood lead and both diastolic and  
6 systolic blood pressure, and support the relationship  
7 between blood pressure and more severe cardiovascular  
8 outcomes, including heart attacks and death.

9           We've also added uncertainty estimates to our  
10 model.

11           Regarding cancer effects, basically no substantive  
12 changes.

13           And finally -- I shouldn't say "finally." I have  
14 one more slide.

15           Another recommendation that we see in the report  
16 is that multipathways need to be considered; the recognition  
17 that lead is indeed a multipathway problem. And more  
18 specifically, we indicate that the IEUBK model may be useful  
19 if there are site specific information and if one wishes to  
20 do a multimedia risk management evaluation, we could look at  
21 reductions in air lead or other sources of lead.

22           And in the document, we have provided some  
23 suggestions and a little bit of guidance on how the IEUBK  
24 model can be used in this regard.

25           Now, let me just skip most of what I was going to

1 present and just talk mostly about the alternatives to the  
2 REL. And then, if people want to get into other things,  
3 I'll be happy to do that.

4 As I mentioned, as an alternative to the REL, we  
5 looked now at the change in blood lead levels, the change in  
6 the number of children -- one- or two-year-old children --  
7 that will move above the 10 micrograms per deciliter level  
8 of concern.

9 For our analysis, we used the NHANES 3 geometric  
10 mean and geometric standard deviation for the national  
11 estimates. Again, we incorporated the 10 micrograms per  
12 deciliter level of concern. And, as I've indicated already,  
13 the results, in terms of the additional people that will be  
14 driven above the 10 micrograms per deciliter level, those  
15 results will not be affected by different assumptions about  
16 the mean and the standard deviation.

17 Clearly, they will affect the baseline number  
18 which are due to both air lead and many other sources. But  
19 assuming some level is given, we're looking at what the  
20 change would be above the current baseline level, because of  
21 properties that allow normal distribution -- basically, the  
22 changes in the percent of the population or the percent of  
23 children that will move above 10 micrograms per deciliter  
24 are unaffected by those assumptions.

25 Now, we can look at it graphically and in table



1 form, but to graphically first. Our Figure 5.3 in the  
2 document looks at three different models. Not only do we  
3 have the aggregate model, but we actually have two different  
4 IEUBK models based on different parameters those models  
5 have.

6 And this table indicates for different air lead  
7 concentrations what the percent of one- and two-year-olds  
8 who will be above micrograms per deciliter. So, basically,  
9 you could look at this graph, and try to get a feeling for  
10 what increases in the number of children would be at  
11 alternative air lead levels.

12 DR. SIEBER: And we're assuming there that, since  
13 they don't go to zero, that the other sources would be  
14 dietary, or lead paint, or --

15 DR. OSTRO: Lead paint.

16 DR. SIEBER: That is in addition to the air lead  
17 contribution.

18 DR. OSTRO: Absolutely. The NHANES 3 data  
19 suggests that currently for the population of one- and two-  
20 year-olds, there's been 11 percent of the children above 10  
21 micrograms per deciliter. And we did some back calculations  
22 assuming our own slope. Suppose we went to zero lead in  
23 California, how many kids would be above 10, and it still  
24 would be about 9 or 10.

25 So, clearly, totally wiping out air lead, you're

1 still going to have a large number of children above that.

2 Now, if you like confusing tables instead, here is  
3 the three different models -- the aggregate model, the two  
4 different IEUBK models -- this first model here I blew up  
5 just because I've been told it's not good to present tables  
6 like this in public.

7 So, this is a blowup just of the aggregate model,  
8 so it's an abridged form of Table 5.2. And I just want to  
9 use it for an example of what the information is.

10 DR. GLANTZ: I noticed in the report that, while  
11 you presented all three models, and discussed them briefly,  
12 the numbers in the text and the Executive Summary and all  
13 that are all based on the aggregate model.

14 Could you explain why you did it that way?

15 DR. OSTRO: I don't think that's true.

16 DR. GLANTZ: Or I didn't understand? Okay.

17 DR. OSTRO: For example, we talk about the  
18 increase in the number of children when we go from a zero  
19 level to 0.6, and we say the range is .6 to 2.3. So, it  
20 incorporates the range of the three models.

21 DR. GLANTZ: I see.

22 DR. OSTRO: So, I can't say that for every  
23 estimate we've carried through all those calculations, but  
24 we've tried to incorporate the uncertainty brought about by  
25 the different models.

1           Remember, for the blood pressure effect, these  
2 things -- we'll use the aggregate model. The IEUBK model  
3 only predicts up to age 7. So, we really can't use it for  
4 the blood pressure. But for the I.Q. effects, we tried to  
5 incorporate that uncertainty.

6           DR. GLANTZ: Okay.

7           DR. OSTRO: So, let me just take you through the  
8 aggregate model. As I indicated, our current level of .06  
9 annual average for California as a whole, if we use the  
10 NHANES data for 1 and 2 year-olds, 11.5 percent of the  
11 children would be above 10. We back-calculated and found  
12 that zero, we're expecting about 11 percent.

13           And then we look at different air lead levels and  
14 indicate that, based on our -- the effects of how the whole  
15 distribution of blood leads are moving, we've indicated what  
16 the new percent of children above 100 micrograms per  
17 deciliter would be. And this column is simply the  
18 difference between the rows -- this is the net change over  
19 zero air lead.

20           So, one could simply look up on the table and  
21 indicate what the impacts would be on the percent of  
22 children above 10. So, going from zero to .06, you can see  
23 there's about a .6 percent increase. And going from say 75  
24 to 100, there is an associated increase here.

25           Okay. So, I also have some estimates provided in

1 the document on what the effects are in terms of I.Q.  
2 effects, distributional effects of blood lead, and  
3 hypertension and blood pressure effects at .06. But I think  
4 maybe in the interest of time, I will -- unless there's a  
5 specific request to do so by the Board, I will stop at this  
6 point.

7 DR. WITSCHI: Thank you very much. In reading  
8 some of the comments we received, there were two things that  
9 struck me, which were uniform. I'm not going to go into any  
10 details.

11 But one of them commented that those changes in  
12 I.Q. are really too small to be of practical importance for  
13 individuals.

14 And the other comment, which was raised several  
15 times, was the changes in blood pressure are the same thing,  
16 and maybe not even exist.

17 Would you address two questions, please. The one  
18 is, how confident you are in the evidence that the increase  
19 in blood pressure is a real biological phenomenon? And the  
20 there one, how to translate small changes for individuals  
21 into a problem?

22 DR. OSTRO: Okay. Regarding the I.Q. effects --  
23 first, regarding neurodevelopmental effects, basically, the  
24 question is, how sure we are that something is happening.

25 UNIDENTIFIED VOICE IN THE AUDIENCE: The

1 microphone is not working. We can't hear.

2 DR. OSTRO: Okay. Regarding the  
3 neurodevelopmental effects, basically, they're based on  
4 epidemiologic evidence relating blood lead to I.Q. And in  
5 epidemiology, we always will have problems in measuring both  
6 the dependent variable and the independent variable of  
7 concern here.

8 But our evidence is based on the three long-term  
9 prospective cohort studies that have been undertaken, over  
10 about a 10-year period now, involving thousands of  
11 individuals. And the best evidence that one can do -- the  
12 best way to provide evidence in an epidemiologic study, I  
13 believe, is to basically replicate the study with other  
14 conditions, with other populations.

15 So, we can think of this as three separate studies  
16 where the findings are very, very similar. When we look at  
17 the population of children in the six- to ten-year-old age  
18 group, the latest set of data using a similar I.Q. test, the  
19 WISC-R, we found that each of the studies report a very  
20 consistent association between blood lead and a change in  
21 I.Q.

22 So, this gives us a lot more faith. If we only  
23 had one study, we might be a little bit more concerned. But  
24 this gives us a lot more faith in the estimates. And what  
25 we've done is we've combined estimates from the three

1 studies to generate the estimate.

2 Now, we agree that on an individual basis, the  
3 I.Q. effects that are estimated will be quite small at the  
4 .06 level. As our table indicates, though, if you go up to  
5 higher and higher air lead levels, which are at least  
6 possible under the current lead standard, the consequent  
7 I.Q. effects would rise accordingly.

8 So, one has to think of these things more on a  
9 population basis; that is, the effects on any individual  
10 might be zero. But for the population as a whole -- and  
11 then children will respond differently. But for the  
12 population as a whole, there are these total number of I.Q.  
13 effects.

14 DR. SIEBER: That's certainly true. I agree with  
15 it. But there's no estimates of uncertainty in here. I.Q.  
16 values, for example, in Item 15 in the proposed summary of  
17 findings, there are no uncertainty intervals around the  
18 average, which I believe is 1.32 I.Q. points. So, it might  
19 give the false impression that we know that number was -- in  
20 fact, there's got to be some uncertainty there. Is there  
21 any way to describe this uncertainty with that?

22 DR. OSTRO: Absolutely.

23 In the document itself, we do have uncertainty  
24 estimates. We have 95 percent confidence intervals. So, if  
25 that's not reflected in the summary or the findings, we can

1 make sure that that is. Okay?

2 But we do have 95 percent confidence intervals for  
3 the I.Q. effects in there.

4 Now, regarding the blood pressure effects, the  
5 same thing is the case, but even more so. For this, we're  
6 drawing on roughly 15 or 20 studies that relate blood lead  
7 to blood pressure.

8 And since our last document, there have been two  
9 meta-analyses as well, both indicating that for -- in some  
10 of those studies, the population is 20 to -- age 20 to age  
11 70, but we took a narrower band of age 40 to 59; that there  
12 is an association between blood lead and blood pressure and  
13 again between blood pressure and more serious cardiovascular  
14 outcomes.

15 Now, we took the 40 to 59 year old age group,  
16 because we thought that the evidence was strongest in that  
17 group. And many researchers have specifically looked at  
18 only that age group. The reason being is that, if you look  
19 at a wider age group -- between say 20 and 70 as some of the  
20 studies have done -- age is increasing, but that's related  
21 to blood lead, because there's a blood lead age profile, and  
22 there's also an age blood pressure profile.

23 So, by narrowing the age band, you're reducing the  
24 effects of confounding by age. So, while some researchers  
25 have indicated that there are existing effects for the wider

1 population as a whole relating blood lead to blood pressure,  
2 we decided to focus on the 40 to 59 year olds.

3 Now, the estimates are higher for the 40 to 59  
4 year olds, as you might expect; so, if you wanted to  
5 extrapolate to a wider population, which we did not do, I  
6 would guess that the effects per unit would drop.

7 So, again, to just finish the response to Dr.  
8 Witschi, it's the same idea that some individuals will be  
9 responsive, some will not, probably because of genetics and  
10 personal differences, and so on, behavior patterns,  
11 activities, and so on, medication.

12 So, one should look at these more on a population  
13 basis than on an individual basis. So, we've tried to  
14 indicate what the effects were per person as well as the  
15 effects for the population as a whole.

16 DR. WITSCHI: Thank you. Are there some more  
17 questions?

18 DR. ALEXEEFF: Can I just make one comment?

19 DR. WITSCHI: Yes.

20 DR. ALEXEEFF: I think we should just comment on  
21 our response to comments that have come in. So, I think  
22 Bart was asking if there were some additional clarification  
23 needed on those slides.

24 So, if there aren't, I'd just like to mention the  
25 status of the response to comments.



1           Okay. We received comments from the Gradient  
2 Corporation on behalf of ARCO, also a comment from -- a  
3 series of comments from the Lead Industry Alliance and a  
4 number of associated companies and industries with that, and  
5 also from the Natural Resources Defense Council.

6           We summarized these comments, and they're provided  
7 in the back there, and they were sent to the Scientific  
8 Review Panel members earlier, a couple days ago.

9           And the summaries provided were focused, but we  
10 did thoroughly review the complete comments. But in terms  
11 of our responses, we focused on the summary comments that  
12 each of the commenters provided.

13           And so, we looked at their major points, and we  
14 looked at their documentation for those major points, and  
15 tried to make sure we answered them substantially.

16           So, I don't think there's a need for me to go  
17 through our responses, since these have been available out  
18 in the back and to the SRP members for a couple of days.

19           And there's only one that has -- we had a slight  
20 change on, and that is the response to the NRDC comment,  
21 where they asked us to add some additional health effects  
22 that -- or they had concern about additional health effects.  
23 Other health effects were overlooked.

24           And so, we went back to look at our document. Our  
25 document focuses on the three effects that Dr. Ostro

1 mentioned -- carcinogenic effects, neurodevelopmental  
2 effects, and the cardiovascular effects.

3 But in the Chapter 2, we have sort of a brief  
4 summary of the overview of health effects. And in looking  
5 at NRDC's comments regarding adding some additional health  
6 effects to the document, almost all the ones they suggested  
7 are in Part 2 already. Okay?

8 There's a couple that we feel we did omit, and we  
9 would like to add in. And one was that result regarding  
10 postural sway; there's a relationship between lead and  
11 postural sway. And we thought we'd add a sentence with  
12 regards to that, that lead at low levels has also been  
13 associated with postural sway, and that's a study by  
14 Bhattacharya and associates.

15 That's all we would say about that. These are  
16 very summary comments.

17 And then the other issue that we thought we should  
18 add in was -- had to do with hearing acuity. And so, what  
19 we're going to add is a -- again, in Part 2, a very, just  
20 brief statement that lead levels of 10 micrograms per  
21 deciliter and below have also been associated with decreased  
22 hearing acuity. And that's due to the studies by primarily  
23 Schwartz and Otto.

24 So, there's a couple health effects that we  
25 weren't able to verify, birth defects and spontaneous

1 abortions. So, we weren't going to add those into the  
2 document.

3 So, that's the last, the only change to the  
4 response to comments that we have here.

5 DR. FRIEDMAN: I'd like to first compliment Dr.  
6 Ostro for a very lucid report. But my question is: In  
7 calculating the effects of the raise in blood pressure due  
8 to lead, you focused mostly on heart attacks and cardiac  
9 disease. Hypertension is at least as strongly related to  
10 stroke if not more so. I wondered why there was so little  
11 attention paid to stroke. Maybe I missed it. But I didn't  
12 see much about stroke.

13 DR. OSTRO: It's really due to the history of our  
14 writing this. When we started writing this four or five  
15 years ago -- five or six years ago, there --

16 DR. GLANTZ: Bart actually has had a stroke in the  
17 interim.

18 (Laughter.)

19 DR. OSTRO: No. There seemed to be a little bit  
20 more controversy around the stroke than around the MI and  
21 mortality quantification. However, I did, when I looked --  
22 recently, there was a series of articles in JAMA and several  
23 other -- Lancet, and some other publications, which were  
24 exactly confirming what you're saying now; that there does  
25 seem to be, as well, affects on stroke.

1           So, since we hadn't been really focusing that much  
2   on the blood pressure effects, per se, and we thought we'd  
3   cover a large number of the effects that would be expected.  
4   We didn't go back and add the strokes to that. But I think  
5   your statement is correct. There does seem to be a pretty  
6   strong association with stroke as well as some other  
7   cardiovascular outcomes.

8           DR. FRIEDMAN: Would you think it would be worth  
9   adding a little bit more about stroke to the report? I hate  
10   to give you more work to do, but I wonder if it would be  
11   worth it.

12          DR. OSTRO: We could actually add, as George has  
13   added, some sentences that -- we could also add a couple of  
14   sentences indicating some other potential cardiovascular  
15   effects that we did not quantify. That would not be hard to  
16   do.

17          DR. FRIEDMAN: I think that would be worthwhile.

18          DR. FROINES: We could approve the document with  
19   the provision that that will be added, so we don't have to  
20   go back.

21          DR. ALEXEEFF: As we've done in the past, we could  
22   just have Dr. Friedman confirm the sentences or review those  
23   sentences if we don't have them done today.

24          DR. WITSCHI: We were promised some comments.

25          DR. GLANTZ: Yeah, I have some comments. The

1 first thing is I, too, want to compliment the staff on a  
2 really nicely done report. And I think that you've done a  
3 good job of integrating the data that's become available in  
4 the last three years, more or less, since we looked at this.

5 And I also think you've done a good job of  
6 responding to the public comments, and even to the point  
7 that -- or at least one of the commenters from the lead  
8 industries has recognized that you've been responsive.

9 And you've made a bunch of changes in response to  
10 the letter that I sent you through Dr. Pitts. And I have a  
11 bunch of additional small changes that I think are necessary  
12 in the document. And I'll just run through them.

13 Most of these things are additional points of  
14 clarification. But in some, in some cases, I think that  
15 they really reflect changes that are necessary to make the  
16 document accurate. Because we heard earlier in the  
17 discussion of the RAAC report the need to accurately reflect  
18 the uncertainty that is implicit in any risk assessment, and  
19 we certainly at every meeting obsess about that. But I  
20 think in this case there were several changes made to this  
21 document which lead to an overstatement of the uncertainty,  
22 which in terms of many of the end points in here, I think  
23 are relatively -- there's relatively little uncertainty  
24 compared to what we're used to dealing with.

25 And I think someone reading this document could

1     come away thinking there's a lot more confusion about some  
2     of these health end points than there really are.

3             And so, those are where my comments are directed  
4     to. And let's see. I'll just go through these quickly.

5             On page 5-16 -- and some of these are just points  
6     of clarification, and this is in the response -- this is in  
7     the response to me thing, not in the actual document, but in  
8     this letter. It's a fax of a fax of a fax of my letter.  
9     This thing (indicating document).

10            On page 5-16, your response number four, at the  
11     bottom of the page, where you're talking about the impacts  
12     on a community of 2,000 people on kids, you say, this  
13     amounts -- you're talking about an effect of an increase due  
14     to a point source. The last sentence on the page, you say,  
15     "This amounts to between 3 (and) 8 children" that would end  
16     up with an increased blood lead level. After 3 to 8  
17     children, in parentheses, I think you should add "in a small  
18     community of 2,000 people," so you know what the denominator  
19     is.

20            DR. OSTRO: We could actually say what the number  
21     of children are.

22            DR. GLANTZ: Okay. That would be even better.  
23     Yeah, that would be even better. Yeah, because that would  
24     let people know what the denominator is.

25            Then, at the bottom of page 6-5, the second to the

1 last line, delete the quotes around "threshold." You know,  
2 it doesn't need to be in quotes.

3 And then, oh, and this was something that I talked  
4 to George about. He was going to look up, on page 6-6 in  
5 the first full paragraph, you said, "Because of the fewer  
6 number of studies for women, we therefore have assumed that  
7 the effects of blood lead on diastolic blood pressure for  
8 women are. . .half that for men."

9 And the number of studies isn't the effect of lead  
10 on blood pressures. And, George, you remember you were  
11 going to come up with a sentence that made more sense there.  
12 Have you done that?

13 DR. OSTRO: I have a response to that.

14 DR. GLANTZ: Okay.

15 DR. OSTRO: There's a couple things. There's two  
16 points. First, the number of studies just makes us a little  
17 bit less certain.

18 DR. GLANTZ: That's okay.

19 DR. OSTRO: But we do say on a couple pages  
20 earlier -- hope I can find it for you -- or maybe it's in  
21 the new paragraph. That there's evidence from the Schwartz  
22 study, which looked at both men and women, that the effects  
23 for women were about half that for men.

24 DR. GLANTZ: Uh-huh.

25 DR. OSTRO: But there is a meta-analysis by

1 Staessen which indicate that the effects are about the same  
2 for men and women.

3 DR. GLANTZ: Un-huh.

4 DR. OSTRO: So, in the spirit of being cautious,  
5 Stan, we just assumed the .5, given the fewer number of  
6 studies.

7 DR. GLANTZ: Well, but what used to be cautious  
8 led you to overestimate risks; now caution is to  
9 underestimate risks?

10 DR. ALEXEEFF: Dr. Glantz, if you look on page 6-5  
11 of our response to your comment, the paragraph beginning  
12 with the word "Similar," which is kind of two-thirds down  
13 the page --

14 DR. GLANTZ: Yeah.

15 DR. ALEXEEFF: Okay. And then you go down a  
16 couple of sentences there. This is what Bart is referring  
17 to. It says, "For example, Schwartz (1991) used NHANES II  
18 data to examine the relationship between blood lead and  
19 blood pressure in men and women age 20 and older."

20 DR. GLANTZ: Uh-huh.

21 DR. ALEXEEFF: And then it says, "Blood lead was a  
22 statistically significant predictor of diastolic blood  
23 pressure and of left ventricular hypertrophy in both males  
24 and females across the entire age range examined."

25 Then it says, "The magnitude of the association



1 for diastolic blood pressure was about half that reported for  
2 men."

3 So, that's actually where the half comes from.

4 DR. GLANTZ: Okay. Well, then, I don't have a  
5 problem with the substance. It's just the sentence. And  
6 because I don't think -- why don't you, instead of saying  
7 because of the fewer number of studies of women, why don't  
8 you change it to say, "Based on the limited data available  
9 for women, we have assumed that the effects of blood lead,"  
10 blah, blah, blah.

11 Okay. And then maybe to be cautious, you might  
12 add, you know, "There is some evidence that it might be--"  
13 or do you think it's fair to say there is some evidence that  
14 the effect might be larger, or do you think that based on--

15 DR. OSTRO: Larger than men or larger than --

16 DR. GLANTZ: No. Larger than .5.

17 DR. OSTRO: Oh, yes. There's definitely some  
18 evidence of that.

19 DR. GLANTZ: Well, why don't you also, then, add  
20 in a statement there maybe after that sentence or something.  
21 That is a long sentence. Why don't you just after that  
22 sentence add a sentence that says, "This may underestimate  
23 the risk, because there is some evidence that the risks for  
24 men and women are comparable.

25 Would you say that's an accurate statement?

1 (There was no oral response.)

2 DR. GLANTZ: Okay. Then, going through the report

3 --

4 DR. ALEXEEFF: Will you wait one second?

5 DR. GLANTZ: Sure.

6 DR. ALEXEEFF: Okay. Thank you.

7 DR. GLANTZ: In Part B, if you look at page 5-10,  
8 in the last full paragraph, the effects for the hypothetical  
9 elevated exposure, you should delete that "hypothetical,"  
10 because it's based on a real place.

11 A couple lines down, at the end of the line,  
12 change that "could" to "would."

13 And in the last full line you say, "Might occur."  
14 The word "might" should be changed to "would be expected to  
15 occur."

16 And then the fourth line of that paragraph, change  
17 "would" to "could."

18 DR. OSTRO: Okay.

19 DR. GLANTZ: That should be put back in the way it  
20 was in the original. Then, at the bottom, take out "might"  
21 occur and that should be "would be expected to."

22 DR. OSTRO: Okay.

23 DR. GLANTZ: The last full paragraph on the next  
24 page, you had changed --

25 CHAIRMAN PITTS: What page?

1 DR. GLANTZ: the last full line on page 11. You  
2 had changed "10 micrograms per deciliter that could  
3 potentially result. . ." I think you overdid the  
4 uncertainty in light of the evidence you presented.

5 On page 5-12 in the middle of the page, there's a  
6 deletion that should be put back in. That's starting with  
7 "In certain cases."

8 And then, a couple of sentences down, it says that  
9 the air lead concentrations at .5 micrograms per cubic  
10 meter, see that sentence?

11 DR. ALEXEEFF: Yes.

12 DR. GLANTZ: That should be moved to the end of  
13 the paragraph. And in its place, you should say, "at lead  
14 concentration equivalent to the ambient standard of 1.5  
15 micrograms per deciliter, more than 32 percent of children  
16 age 1 and 2 would have blood levels above the CDC guideline  
17 of 10 micrograms per deciliter (sic).

18 DR. ALEXEEFF: Could you read that again?

19 DR. GLANTZ: "At lead concentration equivalent to  
20 the ambient standard of 1.5 micrograms per deciliter --

21 DR. DENTON: It's per "cubic meter."

22 DR. GLANTZ: 1.5 micrograms per cubic meter, more  
23 than 32 percent of children age 1 and 2 would have blood  
24 levels above the CDC guideline of 100 micrograms per  
25 deciliter according to the aggregate model (Table 5-2).

1 DR. ALEXEEFF: One second, please.

2 DR. GLANTZ: Sorry. I just want to finish this.

3 DR. FRIEDMAN: I wonder if we could take care of  
4 this in writing, as we have done in the past, and have the  
5 staff --

6 DR. GLANTZ: (Interjecting) They took three years  
7 to make the changes from the last time we met. I'm jus  
8 taking the time to go through, and it will be done. If  
9 there's any disagreement on these, you can say so, and we'll  
10 argue about them. Somebody thought it needed to be changed  
11 back again.

12 On page 13, the first change in there where you  
13 changed "elevates" to "may account for" should be changed  
14 back to "elevates."

15 And in the next line, "increase" should be  
16 deleted. And then --

17 DR. ALEXEEFF: One second.

18 DR. OSTRO: I think you're right.

19 DR. GLANTZ: Okay. 0.15 --

20 DR. OSTRO: Okay.

21 DR. GLANTZ: then in the middle paragraph at the  
22 bottom where you have -- it says, "Lead levels," you deleted  
23 the word "poisoning." That should be, "any blood levels and  
24 lead poisoning."

25 And the next page, page 5-14, you've got a change

1 where you say, "elevated near source environmental levels."  
2 I think that "near source" should be put back the way it  
3 was.

4 Then, where you have .6 percent times 1,200,000  
5 equals 7,200 -- the word "additional" should be put back in.  
6 You're talking about "additional," not an absolute number.

7 And then in 5.3.2, "hypothetical elevated air  
8 lead" should say, "elevated near source air lead exposure  
9 scenario. It's a real place.

10 DR. ALEXEEFF: Okay.

11 DR. GLANTZ: That should be changed back to the  
12 way it originally was.

13 DR. FRIEDMAN: Can I just say something? I would  
14 like to see you work this out with the staff, and we can be  
15 assured that the changes will be made, and that way we don't  
16 hold up --

17 DR. GLANTZ: I really feel it's worth taking the  
18 time. If someone disagrees, I want them to say so. It 's  
19 very important, I believe. It might be boring, but I feel  
20 there have been substantive changes made since the last time  
21 I had raised the issues. What I had asked to be changed  
22 have been changed back.

23 So, here we go again.

24 5-15, I'm just thinking these -- I want to  
25 emphasize that these are changes to bring the language in

1 the report into agreement with the numbers in the report,  
2 and to ore clearly represent he factual statements in the  
3 document. I think that these are substantive changes in the  
4 fundamental conclusions of the report.

5 But anyway, continuing to page 5-15 in the third  
6 line, the word "hypothetical" should be deleted. And so,  
7 the sentence should read, "This community scenario is partly  
8 based" -- delete the "partly."

9 So, the "scenario is based on the information in  
10 Part A," et cetera, et cetera.

11 And then, in the second to the last line of that  
12 paragraph where it says, "The number of young children  
13 calculated to exceed," insert the word "CDC," -- Centers for  
14 Disease Control -- "blood level guideline of 10 micrograms  
15 per cubic meter."

16 then, in the next paragraph, at the end of the  
17 paragraph where it says level of concern there, I would say,  
18 "CDC guideline," so it's clear what you're talking about.

19 I'm actually skipping a couple pages. On page  
20 5-17, in the second line in the middle, "level of concern"  
21 should be changed to "CDC guideline," so it's clear what  
22 you're talking about.

23 And then it says, "Using the hypothetical elevated  
24 exposure example in Section 5.3," that should be changed  
25 back to the way it used to read. It should say, "Using the

1 ear source exposure example."

2 Again, it's not a hypothetical example. It's a  
3 real place.

4 then, in the middle of that paragraph, you're  
5 talking about 10 micrograms per deciliter as "the level of  
6 concern." That should be the "CDC guideline."

7 In the next paragraph, where it says, "With  
8 regard to hypothetical elevated exposure," it should be  
9 changed back to say, "near source" as it was before.

10 Then, on page of page 5-18, where you have deleted  
11 Table 5.4, that should be put back in, and the reference to  
12 it should be included.

13 Then, I'm all done with that, and I'm in the blood  
14 pressure part on page 6-2.

15 Okay. This is something you may have already  
16 fixed, George, where you say in the middle, "current ambient  
17 air levels may be associated with an incremental 26,000  
18 cases of hypertension." You see that?

19 And is there something you already fixed? It's  
20 not clear.

21 DR. OSTRO: Yes.

22 DR. GLANTZ: Okay. Then you have added a  
23 sentence, "as indicated by the order of magnitude range of  
24 risks," that sentence should be deleted. I think that  
25 there's not a considerable uncertainty here. It's an

1 inaccurate statement.

2           Then, on page 6-3, under equation 6-2, where you  
3 say at the end of the first line, the equation "could"  
4 result, should be "would" result.

5           Then, at the top of page 6-5, you had a sentence,  
6 "As indicated by the range of values representing the 95  
7 percent confidence interval, there is considerable  
8 uncertainty. . ." That should be deleted. I think,  
9 compared to most of the stuff we've done, this has very  
10 little uncertainty.

11           Let's see. The language in the middle paragraph,  
12 last sentence, it says, "an estimated average 26,000 cases."  
13 The word "average" should be deleted. You already fixed  
14 that?

15           DR. OSTRO: No.

16           DR. GLANTZ: The word "average" doesn't mean  
17 anything there.

18           And then in the lower part of the page, one, two,  
19 three, four, five, six lines up from the bottom, you said,  
20 "Care should be taken to not ascribe a greater precision or  
21 accuracy to these risk estimates."

22           "Accuracy" should be deleted, because it's  
23 redundant.

24           And in the Executive Summary, you have --

25           DR. ALEXEEFF: I'm sorry. Could you wait a



1 second?

2 DR. GLANTZ: I think that you have taken care of  
3 some things today in response to my letter.

4 On page 8, that's your response back to my letter  
5 of October 18th to Pitts. Okay. Insert 1, I think, should  
6 not be inserted. It's on page 3, you see?

7 Insert 1 should not be inserted.

8 In the Executive Summary, page 8, the last  
9 sentence in the first full paragraph, "Based on these  
10 studies, a blood level of 10 micrograms per deciliter has  
11 been identified as the level of concern for children." It  
12 would be appropriate to say, "been identified by CDC."

13 Why don't you say, "by CDC," so it's clear?

14 DR. MANN: We also reidentified it.

15 DR. VANCE: That would not be appropriate.

16 DR. ALEXEEFF: I could say "reviewed by" on that.

17 DR. GLANTZ: Would it be fair to say, "by CDC and  
18 concurred in by OEHHA"? Could you go for that?

19 DR. OSTRO: I would.

20 DR. GLANTZ: By CDC and concurred by OEHHA.

21 Then, on page 10, insert 4 and insert 7 should not  
22 be inserted. Again, I think they're misleading statements.

23 And then, on Table 1 -- before I do that, and if  
24 you look at the list of Executive Summary inserts, I'd like  
25 to suggest two changes in the wording there.

1           Insert 6, if you see that there, last sentence,  
2 "each subsequent year, the models suggest an additional 780  
3 children would be predicted to have I.Q. levels below 80.  
4 Change the word "suggest" to "estimate" That's clearer.

5           And then, at the bottom, insert 13, and I would  
6 add the following under the unit risk for cancer due to lead  
7 is 1.2 times 10 to the minus 5. That's added at the end of  
8 insert 13 in the footnote.

9           And there's a new sentence for toxicity, which --  
10           (Thereupon, the reporter requested  
11           Dr. Glantz to speak into the microphone.)

12           DR. GLANTZ: I'm just trying to get through this  
13 and get it done.

14           So, that would be the new footnote in Table 1.  
15 And then in Table 1, change the title of the table to --  
16 delete the word "cancer," so that it just says "Potency,"  
17 and then lead would be lowered in the table with a unit risk  
18 of 4.6 times 10 to the minus 4.

19           The lead line would be deleted and would be  
20 inserted between Benzo{a}pyrene and nickel, with a unit risk  
21 of 4.6 times 10 to the minus 4, and the explanation that  
22 it's mostly cardiovascular. Okay? Those are my --

23           One other thing here.

24           DR. SIEBER: Stan, go back to the last one, I  
25 wasn't clear on all this. Why are you making a change to

1 the table? To me, it's pretty clear. There's cancer  
2 potency values for all of them. You want to delete cancer  
3 and then -- it just seems a strange way to go about it.  
4 There might be a better way to change it. I frankly don't  
5 understand it.

6 DR. GLANTZ: This table is looked at by a lot of  
7 people to sort of say, "Is this bad or not? How bad is it  
8 in the spectrum?"

9 And to put lead in that table, I mean, the lead is  
10 a difficult compound. So, it seems to me that the reason  
11 people care bout cancer is that it kills you. So, that's  
12 why people don't want to get it. And is 4.6 times 10 to the  
13 minus 4 unit risk from numbers in the report, and so that's  
14 the potency for death. And it's for cancer death for  
15 everything except lead. I think it should be made clear. I  
16 think it's very important that lead appear in the table of  
17 relative potency and reflective of the true risk associated  
18 with it, and it's probably an inconsequential end point.

19 CHAIRMAN PITTS: I think we're confusing them.  
20 You can add a Table 1A, and then have a little section with  
21 a line saying this is for cardiovascular potency, and it  
22 would be down lower here. And then you have answered the  
23 question. The cancer potency is low and --

24 DR. SIEBER: You could put the there number  
25 following the cancer potency factor in the footnote and say

1 something about the risk for cancer.

2 DR. GLANTZ: My only concern is -- if it's moved  
3 to the bottom of the table, I wouldn't care. But again, if  
4 we're interested in accurately communicating risk as  
5 documented in this report, the reader -- you don't take  
6 something that's going to end up in the top third in the  
7 list and sort of dump it into the footnote.

8 The way that I drafted it up was not irrational.  
9 Obviously you guys can see the logic of it. The whole idea  
10 is to put it in some context, so I think it's -- so, I think  
11 that two tables --

12 DR. FROINES: The cancer potency is too high,  
13 because you're not dealing with mortality. We're dealing  
14 with lead. If we --

15 DR. GLANTZ: I can live with that. That's fine.  
16 I'll leave it up to staff to do it in two tables, and let me  
17 look at them, and I'll see what -- cancer potency is not a  
18 key end point. So, let's see.

19 I have a couple of other things, then I'm done.

20 Let's go back now to the original findings in the  
21 brown document. That's the summary.

22 I'm sorry, the findings (sic). "Is there a  
23 concern for exposure to inorganic lead in California?"

24 I propose the following sentence at the end of  
25 that paragraph. "Cardiovascular and more toxicity end

1 points are more important than cancer."

2 And then on page 6, "Is there evidence of indoor  
3 exposure. . ." You need to add second-hand smoke as one of  
4 the sources. I couldn't let that pass. Indoor smoke.

5 And then at the top of page 11, you've added, "As  
6 indicated by the range of values," that sentence should be  
7 deleted. Again, I think it's misleading.

8 Then, on page 12, third line down, "For the  
9 noncancer end points," you see the second full sentence on  
10 page 12? I suggest making that a new paragraph. I think it  
11 would be clearer.

12 And then at the end of that paragraph, also say,  
13 "Noncancer end points are more important for lead."

14 And then the section, "Is there a threshold level  
15 for lead?" Since such estimates are not exact predictions,"  
16 you see that sentence? I think that should be deleted.

17 And then on page 15, the third line down, you say,  
18 "level of concern." I'd change that to say "CDC guideline  
19 of 10 micrograms per deciliter."

20 Then in the next paragraph, you've underlined  
21 "possibly," and you haven't underlined anything else in the  
22 report. It's clear if you just say "possibly."

23 At the end of the paragraph, last line, it says,  
24 "blood pressure and related cardiovascular effects."

25 Now, what I think you mean to say there is

1 increased risk of fatal myocardial infarction.

2 DR. OSTRO: Cardiovascular effects includes MI and  
3 mortality.

4 DR. GLANTZ: Death from coronary heart disease It  
5 would be more correct to say increased risk of fatal  
6 myocardial infarction and death from coronary heart disease;  
7 would that be correct?

8 DR. OSTRO: Uh-huh.

9 DR. GLANTZ: Well then, you should say that.

10 DR. FRIEDMAN: I see what you're attempting to do.  
11 And maybe you should add frequency then, and add some other  
12 effects, such as hypertension, and not be too limiting.

13 DR. GLANTZ: Happy to do that. You can add that  
14 if you --

15 DR. OSTRO: Just add the related change, more  
16 serious cardiovascular outcomes.

17 DR. GLANTZ: Just so you make it clear.

18 So, those are my modest suggestions. So, you'll  
19 never send me another report.

20 (Laughter.)

21 DR. GLANTZ: I just think that it makes it much  
22 more accurate.

23 DR. ALEXEEFF: Can I ask a question?

24 DR. GLANTZ: Sure.

25 DR. ALEXEEFF: A number of the comments that you

1 made -- and we've tried to take them all down -- a number of  
2 them reflect directly on the Air Resources Board, and  
3 particularly changes in the Executive Summary. And I'd like  
4 to take a couple of minutes to confer with them to see if  
5 they have an issue with this.

6 CHAIRMAN PITTS: Five minutes.

7 (Thereupon, a recess was taken.)

8 CHAIRMAN PITTS: Ladies and gentlemen, I'll ask  
9 you to take your seats and call the meeting to order.

10 MR. OLIVER: Dr. Pitts and members of the Panel,  
11 my name is Kirk Oliver. I'm an attorney with the State Air  
12 Resources Board. And I wanted to inform you that there's  
13 been a request from a member of the public that this hearing  
14 be continued on the inorganic lead identification until the  
15 December meeting of the Panel to allow public comment on  
16 these proposed changes, and to put that question to you, Dr.  
17 Pitts, and the other members of the Panel.

18 CHAIRMAN PITTS: Oh, all right. Fine. I  
19 appreciate that. And we certainly will -- and it's  
20 appropriate to consider this request at this time.

21 I the context of this request, let me ask the  
22 following from the staff for the OEHHA and the staff from  
23 ARB, their feeling as to the -- whether these comments or  
24 suggestions -- one, were they wholly new and were they  
25 completely new material to them, and essentially to previous

1 reports. To what degree does this represent new material?

2 That's just a question there.

3 And have there been interactions with the two  
4 staffs -- I'm just curious myself -- on these matters prior  
5 to this meeting?

6 DR. ALEXEEFF: I didn't understand the last part.

7 CHAIRMAN PITTS: Well, have there been discussions  
8 on these? Have there been interactions on these?

9 Scientific discussions. Do they represent new science?

10 I guess the question is: Does this represent new  
11 science, new information that hasn't been previously covered  
12 or, as Stan has stated I believe, that it's clarifying a  
13 number of issues that could be used -- clarified to get a  
14 more cogent document?

15 DR. ALEXEEFF: Right. No, these -- the changes  
16 suggested are simply clarifications and most of them seem to  
17 be removal of redundancies that we had in some of the  
18 sentences.

19 So, we don't see any change in the science or  
20 change in a substantive way. We do have one comment or a  
21 suggested change back with regard to the near source  
22 hypothetical issue. And we think that in the discussion of  
23 the -- that's an example where we near source, and then we  
24 switched back to hypothetical, kind of go back and forth as  
25 to what's the best way of explaining it.



1           And I think that probably the best way is, instead  
2   of saying hypothetical near source or hypothetical elevated  
3   exposure, we conferred with ARB staff, and the best way to  
4   express it would be an estimated near source. Because there  
5   is some estimation involved. And then also to clarify on  
6   the -- where we cite where the information comes from, Part  
7   A, Table 4-3, just add the additional tables related to that  
8   Table 4-3, 4-4, 4-5, 4-6. And that provides information  
9   where the estimates come from.

10           DR. GLANTZ: I don't have any problem with that.

11           CHAIRMAN PITTS: All right.

12           DR. GLANTZ: That's fine with us. We concur with  
13   OEHHA.

14           CHAIRMAN PITTS: All right. Other --

15           DR. FROINES: I have two comments. One, that  
16   making the changes to a document is a process that we have  
17   done for 13 years that I've been on the committee. And  
18   we've made small changes at the meetings to avoid having to  
19   go back -- to avoid having to determine that a document is  
20   whatever that term is.

21           DR. GLANTZ: Seriously deficient.

22           DR. FROINES: Seriously deficient. To avoid  
23   having to do that, we've made small changes, which staff has  
24   been willing to accept. And that's been the consistent  
25   pattern throughout.

1           So, I don't think this is any different than  
2 anything we've done on prior occasions.

3           Secondly, we have approved the document some time  
4 ago. And this is, in a sense, a return to -- some of the  
5 changes actually take this document back to what's -- the  
6 document that we already approved.

7           So, it's not as though there'd been substantive  
8 changes. In fact, it's in a sense a reinforcement of what  
9 we had already approved. So, I think that the argument that  
10 there are new substantial changes occurring is not correct.

11          CHAIRMAN PITTS: Anybody else?

12          DR. SIEBER: Well, can I ask a question?

13          DR. GLANTZ: Sure.

14          DR. SIEBER: I suppose we could vote on it, but  
15 first, before we do that, what would be the consequence of  
16 continuing the discussion until December? Procedurally,  
17 what does that mean? Does it go out for public comment  
18 between now and December? What happens?

19          MS. SHIROMA: Yes, that's correct. We would  
20 produce a new draft document with Dr. Glantz' proposed  
21 changes and our amendment to that, and we would send it out  
22 to the mailing list for the comment period. And then we  
23 would return to the December 16th meeting. It would mean a  
24 short comment period.

25          DR. GLANTZ: Is that going to cause problems?

1 There's nothing here that's of substance. This is all  
2 clarity. Are we going to get stuck where somebody's going  
3 to come back and say, "You're rushing it, because you didn't  
4 give us X-months of public comment look at this thing"?

5 CHAIRMAN PITTS: You would have public comment.  
6 Is it clear that the statutory -- would it appear that the  
7 concept of public comments, would that be satisfied by the  
8 process in which the individual from the audience requested,  
9 would that, in fact, be adequate public comment -- time  
10 period to qualify for an adequate time period for public  
11 comments (sic), to have time so the process could take place  
12 and have them in time for the December 16th meeting?

13 MS. SHIROMA: Our counsel is checking that. I  
14 know that the statute says that 21 days prior to the SRP,  
15 our staff submittal to you. Now, you are asking for some  
16 changes, so it's coming back this way. But anyway, I'll  
17 turn it over to our staff counsel.

18 MR. OLIVER: Dr. Pitts, I believe the statute says  
19 that the report or whatever we end up with this report today  
20 has to be made available to the public. It doesn't say  
21 exactly how long. I'm quoting Health and Safety Code  
22 Section 39661(b).

23 So, I think we would be well within any kind of a  
24 time parameter to give public comment an adequate chance to  
25 review and say that they have to say about the report.

1 DR. GLANTZ: Could I just say one thing as the  
2 person who inadvertently started this discussion? And I  
3 apologize for doing it, for being overzealous.

4 I have plowed through all of these public comments  
5 from all of these people over, and over, and over again.  
6 And if we were to continue this to give people an  
7 opportunity to further comment, would it be possible to say  
8 that the comments should be restricted to the changes that  
9 were discussed at this meeting so we don't have another 300  
10 pounds of stuff to read?

11 MS. SHIROMA: That would be what we would be  
12 asking comment on.

13 DR. GLANTZ: Bart is looking unhappy.

14 MR. OLIVER: That's entirely appropriate, Dr.  
15 Glantz.

16 DR. GLANTZ: That's all I need to hear.

17 MR. OLIVER: Legally, it's appropriate to do that,

18 CHAIRMAN PITTS: And we would be commenting on the  
19 comments that have been made and changes suggested, in the  
20 context of the previous document, which we actually, in  
21 fact, approved. And so, it will be restricted to that. Is  
22 that correct?

23 MR. OLIVER: That is correct.

24 CHAIRMAN PITTS: All right. I guess -- I don't  
25 know whether we vote on this or not, or whether I --

1 DR. GLANTZ: Does that change our deadline or our  
2 timetable in getting the approved report to the full Board  
3 by its April meeting?

4 DR. DENTON: March.

5 CHAIRMAN PITTS: Let me ask that question again of  
6 Joan. Joan, would that change the deadline?

7 DR. DENTON: Dr. Glantz, it would, and it would  
8 put it off by the amount of time that we would add onto the  
9 comment period. So that means, if we've got two months,  
10 November and part of December, then it would mean, instead  
11 of March, it would May or June.

12 DR. GLANTZ: I feel bad.

13 DR. FROINES: I think that we haven't made  
14 substantive changes, so I don't think it's necessary to get  
15 into a process that is just being further delayed for no  
16 substantive reason.

17 There's no substantive reasons, because there have  
18 been no substantive changes.

19 MR. OLIVER: Dr. Pitts, Kirk Oliver again. Might  
20 I suggest at this point that a vote on that issue might be  
21 appropriate among the Panel, and then we can determine that  
22 and move on.

23 DR. GLANTZ: You mean a vote as to whether these  
24 changes I suggested were substantive or not.

25 MR. OLIVER: First of all, I would vote on whether

1 the Panel would care to adopt those changes into the report.  
2 I don't think that that's been made clear on the record  
3 whether the Panel as a whole or as a majority endorse those  
4 changes.

5 If so, then a second vote on whether or not the  
6 Panel felt that those changes were substantive and deserving  
7 of another opening of a public comment period.

8 DR. GLANTZ: Can I just say one thing so we can --  
9 this will actually speed things up.

10 George has given me -- this is where we can vote  
11 on everything at once -- a brief one paragraph explanation  
12 for where that 4.7 times 10 to the minus 4 number came from,  
13 which I'll pass around, and which I would propose to  
14 reincorporate into the report and the Executive Summary at  
15 the appropriate place.

16 It's just taking numbers out of the report and  
17 showing how they're put together to get that number. So,  
18 I'd like to also add that. This is not substantive. This  
19 is by way of explaining how they computed the number, which  
20 is using standard methods.

21 And other hanging issue is this question about the  
22 I.Q. loss and the economic burden. And during the break,  
23 several of my colleagues -- some expressed enthusiasm for  
24 including it and some expressed enthusiasm for leaving the  
25 report the way it is.

1           So, I think that should be -- I'm happy to do  
2 whatever the majority thinks is appropriate. But I think,  
3 why don't we just get those quickly and we can vote on  
4 everything at once.

5           And I guess this thing about the economic impact,  
6 is that something the committee wants to add or not? I see  
7 two noes.

8           CHAIRMAN PITTS: I don't have a vote, but I don't  
9 think we should.

10          DR. GLANTZ: I vote we leave it out, so that's off  
11 the table.

12          MR. OLIVER: Well, let's let the record reflect  
13 that, as a unanimous vote, the economic analysis language  
14 has been withdrawn by Dr. Glantz.

15          Back to you, Dr. Glantz.

16          DR. GLANTZ: Okay. And then, I would like to just  
17 pass around this thing that George gave me. And this I will  
18 include by -- it's the bottom paragraph. There are two  
19 paragraphs on the page. And that would be integrated.  
20 This, I would say, is just an editorial thing again,  
21 integrated in the appropriate place wherever Table 1 is  
22 referred to in the Executive Summary and in the document, in  
23 Part B, just so people know how that number was calculated.  
24 And again, there's nothing new here.

25          This is a standard unit risk calculation based on

1 the numbers that are already in the report. It's just  
2 showing how they got that one number.

3 So, it's the bottom paragraph. So, I would like  
4 to also, as part of what we voted --

5 CHAIRMAN PITTS: Would you read that paragraph?

6 DR. GLANTZ: Okay. That's a good point. It's  
7 been a long day.

8 Table 1 provides estimates for both the cancer --  
9 this will have to be edited slightly, since we've agreed to  
10 have two tables. Okay? But we'll leave them to edit it.

11 Table 1 provides estimates for both the cancer and  
12 noncancer unit risks associated with lead. The noncancer  
13 risks are based on the predicted number of cardiovascular  
14 deaths for individuals age 40 to 59. The estimates indicate  
15 an expected 74 deaths per year for 7.92 million adults  
16 exposed to 0.06 micrograms per cubic meter air lead  
17 concentration.

18 Therefore, the risk for microgram per cubic meter  
19 would be 74 divided by 7.92 million times 1.06 equals 1.54  
20 times -- pardon me -- 1.56 times 10 to the minus 4.

21 Using the upper 95 percent confidence estimate of  
22 218 deaths would generate a unit risk of 4.6 times 10 to the  
23 minus 4.

24 DR. WITSCHI: I have a problem. I still would  
25 hate to see lead with a number next to something like



1 dioxin, vinyl chloride, as though these kinds of things --

2 DR. GLANTZ: No, no. We've already agreed to have  
3 two separate tables.

4 DR. WITSCHI: Okay.

5 DR. GLANTZ: So, this will be changed. Where now  
6 Table 1 is the cardiovascular and Table 2 is --

7 (Thereupon, several members spoke simultaneously.)

8 CHAIRMAN PITTS: Table 1 provides for the  
9 noncancer unit risks.

10 DR. GLANTZ: So, the first sentence would say  
11 Table 1 provides estimates for the noncancer unit risks.

12 CHAIRMAN PITTS: Are there any questions?

13 DR. GLANTZ: The Table 2 will be the cancer table.

14 CHAIRMAN PITTS: That needs no further comment.

15 Is there any discussion on this? Do I hear a motion to  
16 include this?

17 DR. SIEBER: I'd move that we include the amended  
18 table.

19 CHAIRMAN PITTS: Is there a second?

20 DR. WITSCHI: Second.

21 CHAIRMAN PITTS: All in favor?

22 (Thereupon, there were hands raised.)

23 MR. OLIVER: Excuse me, Dr. Pitts. Let the record  
24 reflect there was a unanimous vote to include that amendment  
25 that Dr. Glantz proposed to the Table 1.

1           CHAIRMAN PITTS: All right.

2           Now is an appropriate time to vote on the question  
3 as to moving on the proposed modifications that were  
4 discussed during SRP meeting today.

5           DR. FRIEDMAN: I move that we accept them.

6           CHAIRMAN PITTS: Is there discussion on this? Do  
7 I hear any discussion? If there's no discussion, do I hear  
8 a second to the motion?

9           DR. SIEBER: Second.

10          CHAIRMAN PITTS: All in favor?

11          (Thereupon, hands were raised.)

12          CHAIRMAN PITTS: Those opposed? Let the record  
13 reflect it was a unanimous vote. See, I'm learning.

14          (Laughter.)

15          CHAIRMAN PITTS: Okay. Now we come to the  
16 question as to the deferral of the vote, if I have this  
17 correctly, on the document.

18          How does the Panel want to handle this request  
19 from the audience? Basically, as I understand the request,  
20 that a member of the audience felt that the comments that  
21 were made by Dr. Glantz were substantive and they were of  
22 such a nature that they should be incorporated, once again,  
23 into a public comment period -- exposed to public comment.  
24 They should be produced for public comment.

25          Now, it is also my understanding that we could,

1 in fact, carry out the public comment process and have that  
2 done by the December meeting. And that's legally correct.

3 It is also my understanding that, if this were the  
4 case, it would, in fact, by statutory requirements I  
5 presume, defer, or delay, or would simply put back the --  
6 assuming that we approved it in December, and the public  
7 comments were answered, and critiqued and answered, we could  
8 then go ahead and put the vote by ARB to something like a  
9 month and a half later?

10 Is that right?

11 DR. DENTON: Two months.

12 CHAIRMAN PITTS: Two months later.

13 I'd like to ask Mr. Oliver, did I state that  
14 appropriately?

15 MR. OLIVER: Right. I guess the vote to the Panel  
16 would be whether they wanted to go ahead and vote and adopt  
17 the report right now and the findings, or would they care to  
18 open these changes that they just adopted to public comment  
19 and reserve their vote until the December meeting.

20 And those changes being only the ones that Dr.  
21 Glantz suggested with the modifications that we've all  
22 agreed on and voted on.

23 CHAIRMAN PITTS: This question is open now to the  
24 Panel.

25 DR. FROINES: I make a motion to adopt the

1 document with the changes that we voted on.

2 DR. WITSCHI: I second it.

3 CHAIRMAN PITTS: Discussion?

4 DR. SIEBER: In the spirit of openness and  
5 communication with the public, I guess my feeling is that,  
6 yes, we would lose a month or two in the final adoption, but  
7 would the gain outweigh the loss there? In other words, a  
8 gain being that the public would, in fact, feel that they  
9 had an adequate input into the final documents. That's  
10 really the issue, balancing one good against another good.  
11 And where you come out -- again, I guess personally, I would  
12 tend to favor having additional public comment.

13 CHAIRMAN PITTS: Craig?

14 DR. BYUS: I don't think there was anything of a  
15 scientific substantive changes made to the document.  
16 Frankly, there was nothing at all that was scientific. But  
17 I think the one, in fact, the language that you've used, Dr.  
18 Glantz, you've actually used the word "substantive change in  
19 the tone of the government." I think that was the fact in  
20 this case. And that's why we sat here and listened to it,  
21 because it did change the tone of the document.

22 And so, although the science wasn't changed and  
23 the scientific opinions weren't changed, I would certainly  
24 vote for it. I also would favor having a public comment  
25 period.

1           CHAIRMAN PITTS: So, basically, you would vote no  
2 on this motion?

3           DR. BYUS: Yes, I would.

4           CHAIRMAN PITTS: With the understanding, that the  
5 second motion would be that we -- how about you, Stan?

6           DR. GLANTZ: Well, I have, first of all, I feel  
7 very guilty.

8           DR. BYUS: Let's not --

9           CHAIRMAN PITTS: No mea culpas.

10          DR. GLANTZ: Okay. Well, in any event, first of  
11 all, there was no -- I want to reiterate that none of the  
12 changes I made were substantive in terms of the scientific  
13 content of the document. No numbers were changed; no end  
14 points were added or subtracted. To me, those would have  
15 been substantive changes.

16          And so, but I think that there were certain  
17 editorial changes that have been in the process of the  
18 document coming to us which, in fact, made the document, as  
19 it was written, not reflect the technical, scientific  
20 content that it included. And that was the goal of my  
21 changes, was to make the language of the document clearer  
22 and more consistent with the scientific content.

23          I'm also very concerned, frankly, that this has  
24 been, of every compound we have worked on, the one which has  
25 dragged on, and on, and on, and on, and on, and on. And I'm

1 very reluctant to let it keep dragging on. But having said  
2 that and since I feel guilty, I'll go with whatever the  
3 Panel wants as long as we have assurances that -- see, when  
4 we had our last meeting almost three years ago where we  
5 discussed this document, we approved it, except for some  
6 very minor components.

7           And, in fact, there were changes made in the  
8 language that we had already approved and voted on. So, we  
9 sent the document back to OEHHA with what I thought were  
10 requests for some fairly minor clarifications. And we ended  
11 up with what, two or three public workshops and almost three  
12 years of delay.

13           And I'm very concerned that that not happen again.  
14 I mean one reason that I went through this the way I did and  
15 made everybody listen to this, was that I wanted to walk out  
16 of here with a finished document. I don't want to plow  
17 through another 5 million pages of stuff.

18           So, I mean, do we have an absolute, ironclad  
19 assurance that, first of all, there will be no further  
20 changes to the document made or suggested by OEHHA or the  
21 ARB; that the document, as we have voted on it and with the  
22 changes we voted will be the document that comes back here  
23 in December? That's the first question.

24           And that we can limit -- that we can limit the  
25 public comment to the changes that were made at this

1 meeting, so that we don't have to go through and reargue a  
2 whole lot of things that have been argued multiple times  
3 already.

4 And I think those are two questions I would like  
5 to be --

6 MR. OLIVER: You can certainly limit the notice to  
7 merely the changes that you have here and perhaps a  
8 resolution of the Board, if that were the majority sentiment  
9 on the Board, reflecting the views that Dr. Glantz just said  
10 in the form of a directive to OEHHA and the ARB might be  
11 appropriate also.

12 MS. SHIROMA: And we don't have a problem with  
13 proceeding in this fashion, as far as putting it out for  
14 public comment the proposed changes given as per the vote,  
15 asking for comment on those, providing about a two-week  
16 comment period, and then receiving the comments, providing  
17 those to you, realizing that staff may have some  
18 recommendations as to how to handle those comments back to  
19 you.

20 DR. GLANTZ: Yeah. But the thing I want to avoid  
21 is getting a whole bunch of rewriting of the document, using  
22 this as an excuse to undo what we've approved.

23 CHAIRMAN PITTS: It will be restricted to  
24 comments on the comments. Can we have the agreement that  
25 this will fall within the acceptable time frames of OEHHA

1 and CARB, that they can produce this material for public  
2 comment; that they can come back -- that it come back to  
3 them in the appropriate time, legally appropriate time; that  
4 they can then forward to the Panel members these comments  
5 and the responses you'll be -- you'll be able to prepare the  
6 responses so we will be able at the December 16th meeting,  
7 then, to make the final decision on the comments on the  
8 comments on the entire document.

9 DR. FROINES: I have a question. I don't agree.  
10 I disagree very strongly, because it seems to me that the  
11 reason I talked about the fact that we've done what we did  
12 today for 13 years is the fact that we have done it for 13  
13 years.

14 And now, it seems to me that we have potential  
15 precedent before us; that everytime we want to make a few  
16 changes to a document, some lawyer in the back of the room  
17 can come up and say, "No. I need now to send it out for a  
18 comment period."

19 And I think that's inappropriate. I think it  
20 minimizes the attempted efficiency of this process. The  
21 reason we do this is to make things flow more smoothly. In  
22 the long run, we're concerned with the public health. We  
23 think having these documents get out has some benefit. And  
24 it seems to me that we have to think about what we're doing,  
25 because this isn't the first time. This may be the first



1 time, but this won't be the last time, because we will have  
2 other people who want to intervene to find more time to have  
3 the process take longer.

4 And then I think that once we decide to do that,  
5 we should realize that we're in that -- we accept that  
6 precedent. I still don't think that there's anything that  
7 Stan's done today that requires going out for public  
8 comment. I don't understand the Panel's view as to the  
9 substance of the issue. I understand the Panel's view in  
10 terms of the perception of the issue. And everybody wants  
11 to have the perception of fairness. I'm for that, too.  
12 Perceptions are important in government.

13 But, in fact, the substance of it is that there  
14 hasn't been anything that's happened here today that should  
15 require a comment period.

16 DR. GLANTZ: Well, can I ask a question? There's  
17 going to be another public comment period. If we approve  
18 this report today, there'll be another public comment  
19 period, right? Because there's a public comment period  
20 before it goes before the ARB.

21 DR. ALEXEEFF: Yes.

22 DR. GLANTZ: And given that there seems to be  
23 unanimity among the members of the SRP that the changes I  
24 proposed were not substantive, why couldn't we now -- John  
25 is now sort of convincing me. Why can't we approve the

1 report and let people comment. And this is actually the way  
2 it's been done in the past with changes that have been made.

3 If people want to comment on the things and people  
4 can come in and try to make an argument that there was  
5 something substantive here, they can take that to the Air  
6 Resources Board, and they can consider it at that point.

7 And what's the downside of doing that? I'm sorry.

8 DR. FRIEDMAN: I agree with both John and Stan. I  
9 feel that the changes that Stan gave were often just a  
10 return to the original language we approved. A lot of the  
11 changes were just getting rid of some redundant words. And  
12 again, I don't feel that the science has changed. I think  
13 there is no need to have an additional public comment  
14 period, especially given that there's still going to be  
15 another month.

16 So, I would argue in favor of approving it today.

17 DR. WITSCHI: I would agree, too, with Stan, and  
18 John, and Gary. Besides, I would also like to make the  
19 observation that really the comments that were received in  
20 March were not very different from the ones that were  
21 received the second time or the third time around.

22 So, at least there were no substantive changes in  
23 the comments that were made. So, I think, sooner or later,  
24 one has to come to a decision in what way to look at and  
25 interpret the existing scientific database.

1           CHAIRMAN PITTS: I'd like someone to clarify the  
2 procedures and the steps that will be followed if we pass  
3 this. Then, this we've approved -- what, the draft? I want  
4 to hear it clearly where we go. Have we approved the final  
5 comment which goes out to public comment? How does one  
6 handle the public comments on the final document?

7           MS. SHIROMA: You will have approved, with the  
8 changes voted on, on the Scientific Review Panel version of  
9 the document. We will then take that, and we need to add  
10 some things to it for purposes of a staff report for our  
11 Board. And then we file that staff report with the Office  
12 of Administrative Law, and provide for a 45-day formal  
13 comment period prior to the Board hearing. The members of  
14 the public may comment during the 45 days, and may also come  
15 to the Board hearing to testify.

16           And then, we are required to respond to all the  
17 comments provided during that 45-day comment, and that  
18 becomes part of the record and also gets filed at the Office  
19 of Administrative Law after the Board hearing.

20           DR. GLANTZ: I really think there's no need then.  
21 I'm sorry.

22           CHAIRMAN PITTS: So, legally then, these public  
23 comments will have been responded to -- forgive the  
24 preposition. You will have responded to the comments on  
25 this document which has been passed.

1           There will be formal responses for the public;  
2   those will be treated in a formal manner and will be  
3   available for the Air Resources Board, our risk management  
4   arm, for their elucidations.

5           MS. SHIROMA: Yes. And, as part of the staff  
6   report, we also include the entire Part C, which are all of  
7   the comments received on the report, plus all of our  
8   responses.

9           DR. SIEBER: And I'm happy to hear that. The only  
10   difference I can see is that the SRP's out of the loop then.  
11   The comments won't come to SRP; they'll be handled by the  
12   full Board.

13          MS. SHIROMA: Yes, that's correct. Now, at the  
14   Board hearing, the leadperson from the SRP is also there  
15   providing a perspective from the SRP, and presenting the  
16   findings of SRP at the Board hearing.

17          DR. SIEBER: Well, that sounds to me like it  
18   handles the situation. So, I think I've been persuaded to  
19   be ready to vote.

20          DR. BYUS: Me, too.

21          DR. GLANTZ: I am, too.

22          If it would be helpful, I'd be willing to go to  
23   that Board meeting.

24          (Laughter.)

25          DR. GLANTZ: No?

1 CHAIRMAN PITTS: No.

2 DR. FROINES: You might get some varying opinions,  
3 though.

4 DR. GLANTZ: That's what my wife says. I look  
5 great on paper, but --

6 (Laughter.)

7 CHAIRMAN PITTS: Do I hear a call for a motion? A  
8 call for the question?

9 DR. FRIEDMAN: Call.

10 CHAIRMAN PITTS: All right. All those in favor,  
11 say aye?

12 (Ayes.)

13 DR. GLANTZ: I'm going to have to abstain. Or do  
14 you rather I voted aye?

15 CHAIRMAN PITTS: I would rather you make up your  
16 own mind.

17 DR. GLANTZ: That's true. I'll vote aye. That  
18 makes it unanimous.

19 MS. SHIROMA: We still have the findings to do.

20 DR. GLANTZ: Okay. Let's do the findings.

21 MR. OLIVER: Dr. Pitts, might I suggest that we  
22 recite to let the record reflect the unanimous vote of the  
23 Panel was to approve the document with the changes. It  
24 might be appropriate for you to say that.

25 CHAIRMAN PITTS: All right. Let the record

1 reflect that the Panel voted unanimously to accept the  
2 document and the changes.

3 But let the record also reflect that the Panel was  
4 seriously concerned with the question of public comments to  
5 the recent comments made by Panel members, and that the  
6 Panel sought clarification on time scales and procedural  
7 matters, and we're pleased to learn -- as a matter of fact,  
8 it was the basis for the certain votes on the Panel that  
9 there would be, in fact, adequate time for public comment,  
10 and that this product would be placed formally in the  
11 proceedings and would be legally there, and meets with our  
12 responsibilities as well as the -- our responsibilities.

13 Now, we have the question of the findings, the  
14 last act. The findings have -- do we all have them?

15 Let's take five.

16 (Thereupon, there was a brief recess  
17 taken.)

18 CHAIRMAN PITTS: Okay. We'll come back to order.  
19 We now in the position where we now wish to vote on the  
20 findings. The findings have been presented to the Panel.  
21 Would you like to discuss these and present them to us  
22 again?

23 DR. DENTON: Sorry, Dr. Pitts. I didn't  
24 understand the question.

25 CHAIRMAN PITTS: We're now prepared to take up the

1 question of the findings. And do you have any changes you  
2 would like to see made in the findings?

3 DR. DENTON: The only change that we recommend is  
4 in Finding 5. given the debate this morning about the  
5 emission inventory, that the Panel clarify in the findings  
6 that the primary source of emissions are aircraft fuel  
7 combustion at 149 tons per day.

8 CHAIRMAN PITTS: Does the Panel agree with this?  
9 That's a default. That's obvious.

10 DR. DENTON: So, we can just add that.

11 CHAIRMAN PITTS: Just add that. There's no  
12 problem.

13 All right. Are there comments as to the findings  
14 from the members of the Panel?

15 DR. OSTRO: Excuse me. For No. 19, the numbers  
16 for the cardiovascular effects should be updated to include  
17 both the males and females.

18 CHAIRMAN PITTS: Is there any objection to that?  
19 Can that be done in the process of --

20 DR. OSTRO: Yes.

21 CHAIRMAN PITTS: All right.

22 DR. GLANTZ: Also, in No. 19, I think you should  
23 add the following sentence:

24 And that is, "These values equate to a unit risk  
25 for cardiovascular disease of 4.6 times 10 to the minus 4,

1 and maybe (Table), whatever table it is. The reason for  
2 putting that in is to relate what it says here to the  
3 numbers in the table.

4 CHAIRMAN PITTS: Any discussion? This is  
5 basically the informational point.

6 DR. GLANTZ: This is just relating the findings.

7 CHAIRMAN PITTS: That's nonsubstantive  
8 information. Okay.

9 Now, I understand that there's something that  
10 should be deleted. An addition and a deletion. Let's do  
11 the deletion first.

12 DR. WITSCHI: The deletion will be on Finding No.  
13 7, the second part of the paragraph, "In addition, the  
14 airborne toxic control measure," blah, blah, blah, down to  
15 "approximately 78 percent."

16 That should be deleted.

17 CHAIRMAN PITTS: Okay.

18 I think it's important to know the reason for  
19 that.

20 DR. GLANTZ: Because it's speculative.

21 CHAIRMAN PITTS: Speculative, and we don't want  
22 speculative material.

23 DR. GLANTZ: It does not have any data to support  
24 what might happen in the future.

25 DR. WITSCHI: Delete, "In addition, the airborne



1 toxic control measure for emissions of toxic metals from  
2 nonferrous metal melting adopted by the ARB is expected to  
3 reduce emissions from facilities subject to this regulation  
4 by 45 percent statewide. Rule 1420, emission standard for  
5 lead, adopted by the South Coast Air Quality Management  
6 District, is expected to reduce emissions of lead from  
7 facilities in the South Coast District by approximately 78  
8 percent." That should be deleted.

9 CHAIRMAN PITTS: We're deleting that.

10 DR. WITSCHI: I have some minor editorial changes  
11 to make. There is nothing substantive.

12 CHAIRMAN PITTS: Unless I hear an objection, we'll  
13 let them be done; nothing substantive?

14 DR. WITSCHI: No.

15 CHAIRMAN PITTS: All right. We have your  
16 assurance and we accept that.

17 DR. WITSCHI: Yes.

18 CHAIRMAN PITTS: Is there anything else?

19 DR. WITSCHI: Yes, there is. There is one finding  
20 that should be added, and this is about there is no REL in  
21 this document, and yet we still have current ambient  
22 standard of lead for 1.5 micrograms per cubic meter, which  
23 is probably too high. And somehow, this should be  
24 addressed. And the following is proposed to add to the  
25 findings:

1           The current ambient air quality standard for lead  
2   in the State of California is 1.5 micrograms per cubic  
3   meter. This standard was based on preventing blood lead  
4   levels in 99.5 percent of children from exceeding 30  
5   micrograms per deciliter, a level of concern that dates from  
6   1978. Since the CDC has revised its level of concern for  
7   children down to 10 micrograms per deciliter, at the new  
8   lead level of 1.5 micrograms per cubic meter, around half of  
9   California children would be expected to exceed the CDC  
10   guideline. Unfortunately, even if all airborne exposure to  
11   lead were eliminated, 10.9 percent of California children  
12   would still exceed the CDC guideline of 10 micrograms per  
13   deciliter. If the State were to adopt the standard of .5  
14   micrograms per cubic meter, one-third the current standard,  
15   the percentage of children exceeding the CDC guideline of 10  
16   micrograms per deciliter would be 21.1 percent, twice the  
17   percentage it would be if there was no lead in the air.

18           At the current ambient level of .06 micrograms per  
19   cubic meter, the percentage of children exceeding the CDC  
20   guideline of 10 micrograms per deciliter is estimated to be  
21   11.5 percent, 0.6 percent over the percentage it would be if  
22   there were no lead in the air.

23           While this is a negligible risk, a substantial  
24   public health risk would develop should the present values  
25   raise in the future.

1           CHAIRMAN PITTS: That's a fairly complex  
2 statement. What it's saying is that the dose of lead, the  
3 lead burden carried by children at an age bracket, is a  
4 certain value of 10.19 or something, micrograms per  
5 deciliter, a number like that.

6           That at .06 micrograms per cubic meter, the  
7 contribution of airborne lead to that is negligible; that  
8 the current burden is basically from other pathways. Am I  
9 correct on that?

10          DR. WITSCHI: Yes.

11          CHAIRMAN PITTS: Now, that's great. However,  
12 there remains the fact that the air quality standard of 1.5  
13 micrograms per cubic meter set many years ago was  
14 coordinated with, in a sense, the 30 micrograms per  
15 deciliter of blood, which was again some 20 years ago. 30  
16 has been dropped to 10.

17          No change has been made in the air quality  
18 standard. I think if we said that, and then said that the  
19 SRP wishes to point this out, and is concerned about a lead  
20 standard that high -- which, although we're far from that  
21 standard today, it should -- what the Air Resources Board  
22 should consider an appropriate air quality standard which  
23 would protect public health from possible future increases  
24 in lead burden beyond the position -- the level it is today  
25 in airborne lead.

1           Have I said that in more or less what we're trying  
2   to say without all the numbers?

3           DR. GLANTZ: I think we could say it better.

4           DR. FROINES: The Panel finds that an increase in  
5   air lead over the current ambient levels would result in  
6   more children having blood leads above 10. And so, in  
7   consideration of this fact, that future -- any lead  
8   standards in the future should not result in a greater  
9   proportion of children having blood leads greater than 10  
10   than currently exist.

11          CHAIRMAN PITTS: That sounds good. Are there  
12   other comments?

13          DR. FROINES: What we're saying is that the policy  
14   of the State is that there will be no standard that will  
15   make matters worse.

16          CHAIRMAN PITTS: Now, what form could we put this  
17   in? Is there a general agreement among the Panel that this  
18   would be a useful finding in that form? And could we ask  
19   you, Professor Froines, to write that out and transmit that  
20   to the staff, with the understanding that no substantive  
21   changes in that what you said would have occurred in the  
22   process of going from what you write to the staff.

23          DR. SIEBER: So, we'll have an opportunity to look  
24   at what's written and the vote on it? I had a hard time  
25   following the words without actually seeing it.

1           CHAIRMAN PITTS: Why don't you write it right now,  
2 and then we'll vote on it while I'm discussing future  
3 meetings.

4           Why don't you write it so we have a clear way of  
5 understanding it.

6           Are there any other questions about the findings  
7 that should be brought up?

8           In other words, we're accepting the findings.

9           Yes, sir.

10          DR. ALEXEEFF: On Finding 17, the percent of  
11 children that will move above 10, we should probably just  
12 use the percent of children that would move above 10.

13          CHAIRMAN PITTS: Okay, fine. That's a  
14 clarification.

15          While they're discussing this, let me just move  
16 ahead and indicate that we will defer the Environmental  
17 Tobacco Smoke discussion till the next meeting, which will  
18 be December 16th. That's number one.

19          So, there's two items on the agenda, and the first  
20 will be the discussion with the DPR. So, that will be two  
21 items, and any updates. The third item on the agenda will  
22 be updating the status of priorities of the programs and  
23 where we are today.

24          Now, is there any other business at this moment  
25 that we can discuss while we're waiting for this particular

1 message?

2 MR. LOCKETT: Mr. Chairman?

3 CHAIRMAN PITTS: Yes, sir.

4 MR. LOCKETT: It would helpful if the Panel would  
5 mark their calendars for January, February, and March --  
6 it's in your material -- as to when they're not available,  
7 so we can set a meeting for the first of the year. If you  
8 do that, we'd appreciate it, then give it to us before you  
9 go.

10 (Thereupon, a recess was taken to allow  
11 the creation of a statement to be included  
12 in the findings.)

13 CHAIRMAN PITTS: Let's come back to order. Yes,  
14 I'd like Dr. Froines to read in his suggested addition to  
15 the findings.

16 DR. FROINES: Dr. Froines would like helpful  
17 suggestions.

18 The current ambient air quality standard for lead  
19 in the State of California is 1.5 micrograms per cubic  
20 meter. This standard was based on preventing blood lead  
21 levels of 99.5 percent of children from exceeding 30  
22 micrograms per deciliter, a level of concern that dates from  
23 1978. The Center for Disease Control, CDC, has established  
24 a level of concern for children at blood lead levels of 10  
25 micrograms per deciliter, and an air lead level of 1.5

1 micrograms per cubic meter, approximately half of  
2 California's children would be expected to exceed the CDC  
3 guideline.

4           Unfortunately, even if all lead exposures were  
5 eliminated, 10.9 percent of California children would exceed  
6 the CDC guideline of 10 micrograms per deciliter.

7           The percentage of children exceeding the CDC  
8 guideline 10 micrograms per deciliter is estimated to be  
9 11.5 percent, five percent more children than if there were  
10 no lead in the air at the current ambient air lead  
11 concentration of 0.06 micrograms per cubic meter.

12           The Scientific Review Panel concludes the ambient  
13 airborne lead levels should not lead to future increases in  
14 blood lead levels in excess of the current distribution of  
15 blood lead levels.

16           DR. GLANTZ: Now, wait, wait, wait. Before you  
17 change it, is that okay, George?

18           Can you explain the five percent versus .5  
19 percent.

20           DR. VANCE: It's a half a percent increase.

21           DR. GLANTZ: The absolute increase is .6 percent,  
22 right? So, it may be that the clearest thing to do, because  
23 I went around and around with George on this when I was  
24 trying to understand the document, maybe that should be  
25 amended to put both numbers to say that it would increase by

1 .6 percent (which would be a 5 percent increase in the  
2 number of children. That way you've presented it both ways  
3 and it's not confusing.

4 MS. SHIROMA: Not to prolong the meeting, but I  
5 just want to make sure you have all of our thoughts here on  
6 this. The way the wording is on this finding, are you  
7 entering the risk management arena as far making a finding?

8 You're pointing out what the CDC has done, and  
9 you're pointing out the results of the assessment, and in  
10 that, did you make a recommendation also in that wording?

11 DR. FROINES: No, we're saying that if the CDC  
12 guideline is 10 micrograms per deciliter, we're saying, as a  
13 matter of public health, that ambient air lead levels should  
14 not be allowed to increase such that a greater proportion of  
15 children have blood leads over 10 than currently do.

16 In other words, we don't want to accept anything  
17 that would lead to a worsening of the distribution of blood  
18 lead levels.

19 DR. FRIEDMAN: That is our recommendation.

20 CHAIRMAN PITTS: But that's risk management.

21 DR. GLANTZ: What about saying it like this -- I  
22 think the thing that's bothering Genevieve is the word  
23 "should."

24 DR. FROINES: Should is different than shall in  
25 regulatory language.



1 DR. GLANTZ: Well, what about simply saying  
2 something like the SRP notes that anything that allowed the  
3 lead level to increase over the current ambient levels would  
4 lead to an increase in the number of kids, or something like  
5 that.

6 CHAIRMAN PITTS: Should this increase, there would  
7 be the corresponding increase of .5 and 5 percent, and you  
8 don't have any draw any other conclusions. That's just the  
9 scientific side of it.

10 DR. ALEXEEFF: Okay.

11 CHAIRMAN PITTS: If that finding is modified to  
12 reflect that perspective, can we leave it to them --  
13 Genevieve and Joan and John say, to modify it from that  
14 perspective?

15 We're not risk managers, but we're just calling  
16 attention to the fact that should this level go up, then it  
17 would -- it could result in a .5 percent increase, .5  
18 percent rise in the blood level, which would correspond to a  
19 five percent increase in --

20 DR. FROINES: I think that's fine. We can do  
21 that. But in every other document we've ever done, we pick  
22 a best value. In this document, we're saying we can't pick  
23 a best value because the State doesn't want to do it, and  
24 that puts us into a risk management phase. That's B.S. as  
25 far as I'm concerned. That's a fundamental difference from

1    what we do in cancer, where we actually say this is a best  
2    value. Go back and look at those potencies. Those are  
3    values that the air quality management districts use as  
4    bright lines, and we all know that.

5               What we're saying here is we're not prepared to do  
6    that in this document. That is a political and policy  
7    decision. It is not a scientific decision. And if that's  
8    the way you want to do it, that's your choice, but that's  
9    what you're doing.

10              MS. SHIROMA: I thought the analogy was that --  
11    and, George, correct me if I'm wrong here -- that the best  
12    value for a cancer relationship is the slope, and I thought  
13    that the relationship given by the OEHHA staff of the blood  
14    lead in children in relation to air exposures was that  
15    slope, was that best value.

16              So, I thought that we were being consistent with  
17    the previous cancer types of documents, in that there was  
18    not a threshold with the lead. There's no threshold. And  
19    so, the relationship provided by the OEHHA staff is that  
20    slope analogous to a cancer slope or best value.

21              CHAIRMAN PITTS: Could that be phrased in such a  
22    way that -- it is slope. It is analogous to a situation  
23    that is not the same as, but analogous to. Would that  
24    satisfy you?

25              DR. FROINES: Everybody wants to get out of here.

1 So, everybody's in a hurry. And that's part of the problem;  
2 we've been here all day.

3 But the unit risk value is what people end up  
4 using.

5 When we first got this document, whatever many  
6 years ago it was in the last century, it was -- George was  
7 asked over and over again, what in the hell is an REL?  
8 Nobody was comfortable with REL.

9 Now, we have come to the point where we now have  
10 no REL. We now have slopes in here, and that's fine. If  
11 you want to do that, you can leave that and let the risk  
12 managers, when they take up this issue, deal with what is an  
13 appropriate air lead level. That's an appropriate thing to  
14 do.

15 We don't need to make the finding about what is  
16 the best value. We, for years people kept saying, but  
17 everybody wants the SRP to give the best value. That's what  
18 we got pushed into to doing against our will.

19 We were pushed to do it, and today you're saying,  
20 oh, by the way, we don't want you to do that anymore.

21 So, you decide the rules and we'll live with them.

22 CHAIRMAN PITTS: Excuse me for interrupting, but  
23 we have three serious airplane --

24 DR. FROINES: But everyone needs to understand  
25 what it is --

1           CHAIRMAN PITTS: We understand that. But are you  
2 saying that there is the information in these statements and  
3 it could be described in a sentence or two, that this is  
4 analogous to -- we find that it is analogous to --

5           DR. GLANTZ: We've all been struggling with how to  
6 say this.

7           DR. FROINES: Let's just leave the findings the  
8 way they are. Let's just vote on them and get out of here.

9           DR. GLANTZ: But you see, the things that set this  
10 whole thing off for me was in the public comments that came  
11 in. The point was made that the REL discussion had been  
12 deleted after we had told them -- I think the first part of  
13 the thing that Pete suggested is simply pointing out that  
14 the current California standard is obsolete. That's a  
15 statement of fact.

16           While it's not the function of the SRP to make  
17 risk management decisions, it does seem clear that the  
18 current California standard for ambient lead of 1.5  
19 micrograms per cubic meter is higher than current science  
20 and prudent public policy and public health practice would  
21 dictate. If lead exposure was at the current ambient level  
22 of .06 micrograms per cubic meter, there would still be  
23 significant adverse public health impacts that are large  
24 compared to many other compounds.

25           (Thereupon, several members spoke

1 simultaneously.)

2 DR. GLANTZ: Well, I tried.

3 DR. FROINES: You should say the -- at the current  
4 standard, there is .5 -- whatever the percentage is --  
5 percent of children with blood leads that are above 10.  
6 Increases in air lead over that value would lead to  
7 increases in blood leads in children over 10, and just stop.  
8 You're making a statement of science.

9 DR. WITSCHI: We have made substantial progress.  
10 And right now, the airborne lead is really no substantial  
11 risk anymore. But we have to convey to the ARB or whoever  
12 makes the regulations, that just because things are find now  
13 and yet we have antiquated standards, that sometime in the  
14 future, somebody comes and works us up to the standards  
15 again. And it would be legal. But what we want to convey  
16 is that anything going above what we have would be a big  
17 public health risk.

18 And that's the message we have to get across to  
19 the regulators.

20 DR. FROINES: Is there some other way we could get  
21 this message across? I think our problem is that we want to  
22 get the message across.

23 CHAIRMAN PITTS: We can do it with a letter. Why  
24 don't we draft a letter --

25 DR. GLANTZ: Can I ask a procedural question?

1 We've adopted the report. Can we delay the adopting the  
2 findings till the next meeting and not delay getting things  
3 out to the public and all that other stuff?

4 MR. OLIVER: No.

5 CHAIRMAN PITTS: The public has to know the  
6 findings and it has to go with the report. The findings are  
7 an integral part. All we're worried about is this last --  
8 let me ask our attorney.

9 Can we now actually communicate the message you've  
10 been hearing, and can we communicate that by a separate  
11 letter to the ARB from the Panel expressing our opinions and  
12 our concerns about -- are interested in this particular  
13 issue. Here are the numbers, and we wish to present them to  
14 you.

15 MR. OLIVER: I think that's an excellent idea, Dr.  
16 Pitts, and one that would certainly get the attention of all  
17 the Board.

18 (Thereupon, several members spoke simultaneously.)

19 CHAIRMAN PITTS: Do I have a second?

20 DR. GLANTZ: I second it, with the following  
21 stipulation. The first part of the thing where he ran  
22 through the 1.5 or the .6, all the factual statements be  
23 included, because those are not in the findings and they're  
24 very important.

25 CHAIRMAN PITTS: I would suggest we have a

1 committee of three -- John, Hanspeter, and you -- you draft  
2 the letter, the three of you.

3 I don't intend to do it now. I think this is  
4 important. You said we could defer this. This is an  
5 important issue. I want to take more time on it.

6 DR. WITSCHI: I want to second Stan's motion that  
7 we leave the facts in the findings.

8 CHAIRMAN PITTS: Absolutely.

9 DR. GLANTZ: All we need to do is --

10 CHAIRMAN PITTS: Is there a second -- is there a  
11 motion we do that? Is there a second?

12 (Thereupon, Chairman Pitts, indicated he  
13 heard a motion and a second, which the  
14 reporter did not hear because of  
15 simultaneous conversations and requested  
16 that information.)

17 DR. GLANTZ: I made the motion.

18 DR. WITSCHI: I did.

19 I'll read it. The current ambient air quality  
20 standard for lead in the State of California is 1.5  
21 micrograms per cubic meter. This standard was based on  
22 preventing blood lead levels in 99.5 percent of children  
23 from exceeding 30 micrograms per deciliter, a level of  
24 concern that dates from 1978. The Center for Disease  
25 Control has reestablished a level of concern for children at

1 blood lead levels of 10 micrograms per deciliter.

2 At an air lead level of 1.5 micrograms per cubic  
3 meter, approximately half of California's children would be  
4 expected to exceed the CDC guideline. Unfortunately, even  
5 if all the airborne exposure to lead were eliminated, 10.9  
6 percent of California children would exceed the CDC  
7 guideline of 10 micrograms per deciliter.

8 If -- okay. The percentage of children exceeding  
9 the CDC guideline of 10 micrograms per deciliter is assumed  
10 to be 11.5 percent, 0.5 percent more children than if there  
11 were no lead in the air.

12 There's something missing. Okay. With current  
13 air lead levels {.06 micrograms per cubic meter}, the  
14 percentage of children exceeding the CDC guideline of 10  
15 micrograms per deciliter is expected to be 11.5 percent or  
16 .5 percent more children than if there were no lead in the  
17 air. And those are the facts.

18 DR. GLANTZ: Yes.

19 CHAIRMAN PITTS: Do I hear a motion?

20 DR. GLANTZ: I move that these findings be  
21 adopted.

22 DR. WITSCHI: Second.

23 CHAIRMAN PITTS: All those in favor? Lt the  
24 record show that there was a unanimous vote.

25 DR. GLANTZ: We can write a letter that takes it



1 further that says that we believe that we shouldn't have  
2 lead levels worse than.

3 (Thereupon, there were simultaneous  
4 conversations.)

5 CHAIRMAN PITTS: We're not going to do it now. Do  
6 I hear motion that the meeting be adjourned?

7 DR. FROINES: I want to say something, and I want  
8 to say it before --

9 MR. OLIVER: Before we move on from the findings,  
10 Dr. Pitts, you should mark your official copy of your  
11 findings as Exhibit 1 and we'll enter that into the record  
12 with the correction that you have.

13 And I'm sorry to interrupt, but I thought before  
14 we moved away from the findings, we needed to clarify the  
15 record on that. And that's all I have.

16 Back to you, Dr. Froines.

17 DR. FROINES: It's a procedural point that the  
18 committee won't take up today, but we have to take up at  
19 some point in the future.

20 What's happened here today is that at one point we  
21 went through Stan's comments and then a lawyer in the back  
22 says that this absolutely must have a continuation. So,  
23 everybody scurries around responding to an ex parte  
24 communication.

25 And later, the same thing happens where it's now

1 said this Panel is getting into risk management decisions.  
2 It's my view that we should not be scurrying around  
3 responding to people's comments from the audience. We need  
4 a more formal process that says if people want to have input  
5 to this, they have input, but not within the context of this  
6 Panel having its deliberations.

7 Because, otherwise, we end up being driven by the  
8 audience. And we have historically always sought to never  
9 have that happen. Our policy has always been that this is a  
10 discussion between the staff and the leadership of the  
11 agencies, and the Panel, and we limit it to that.

12 CHAIRMAN PITTS: I want to say that the comments  
13 and decisions of the Panel have not been modified by any  
14 input from the audience. We have, however, responded to a  
15 comment from the audience regarding the procedures we should  
16 follow in handling comments from our staff; we've done this.

17 It added an extra dimension to this. John, we'll  
18 discuss several of the items in terms of the procedures.

19 One procedural item I would like to put on the  
20 agenda before we adjourn, should we meet every three months?  
21 What is the appropriate role for public comment? This comes  
22 up regularly.

23 It's totally appropriate to review our procedures  
24 and, if we're happy with the way it is in the past, fine.  
25 If we see reasons for modifying those procedures, we'll then

1 get together and discuss these, and we will.

2 Is that appropriate with the Panel?

3 DR. FROINES: I support that.

4 DR. SIEBER: We can't go into it all now, but you  
5 at least raise the possibility that we'd look at our  
6 procedures again.

7 CHAIRMAN PITTS: That will be a formal -- I will  
8 do this. We will look at this, and we'll look at it in  
9 consultation with the staffs and with the appropriate  
10 individuals.

11 Okay. Is there a motion to adjourn?

12 DR. GLANTZ: So move.

13 CHAIRMAN PITTS: All in favor?

14 (Ayes.)

15 (Thereupon, the meeting was adjourned  
16 at 2:50 p.m.)

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## CERTIFICATE OF SHORTHAND REPORTER

I, Nadine J. Parks, a shorthand reporter of the State of California, do hereby certify that I am a disinterested person herein; that the foregoing meeting was reported by me in shorthand writing, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor am I interested in the outcome of said meeting.

In witness whereof, I have hereunto set my hand  
this 13th day of November, 1996.

Nadine J. Parks

Shorthand Reporter

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